Saskatchewan
Community
Services

Provincial
Library

Automation Evaluation Report

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Automation Evaluation Report:

The impact of implementing Dynix on Provincial Library operations and services.

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1.0 EXECUTIVE SUMMARY

1.1 Introduction

The Dynix Library Systems Inc. went into operation in the Provincial Library in January, 1990. The Dynix library system was selected from seven vendor proposals. The Dynix system came closest to satisfying the requirements outlined in the Provincial Library's Request For Proposal (RFP).

1.2 Objectives

The RFP identified the project's main objectives: to automate a maximum number of Provincial Library functions and to test the suitability of the system selected for a library network.

Prior to implementing the Dynix library system, some functions were partially automated. The catalogue records were maintained on Utlas, a database in Toronto. Processing of overdue notices was based on data compiled at Westbridge, a Regina-based computer company. A spreadsheet program run on a Wang computer was used to purchase materials and provide a basic level of budget accounting in acquisitions. Thus, some staff had experience with the use of computers for library functions.

The RFP identified seven key functions to be automated:

- Cataloguing support;
- Circulation;
- Acquisitions;
- Serials control;
- Block control;
- Online public catalogue access;
- Network functions.

This report evaluates these functions with the exception of serials control and network functions which are not yet implemented.

The Evaluation Committee not only assessed how well the implementation of the Dynix library system met the automation needs of the Provincial Library as defined in the RFP, but examined each of the functions for changes in efficiency and effectiveness before and after automation. The Committee determined specific tasks in each function that would be measured before and after automation to provide comparative samples of data.

Two other services were also studied before and after automation: interlibrary loans and bibliographies. The results of the interlibrary loan turnaround time study were

released in a separate report in January, 1991. The turnaround time for interlibrary loans filled from the Provincial Library's collections was reduced by one day. The turnaround time for bibliographies was reduced by three weeks or more.

1.3 Implementation

To begin the automation process, three committees were formed: a Steering Committee, an Evaluation Committee, and a Barcoding Committee.

The Steering Committee was established to provide input regarding the needs of each of the 10 public library systems during the development stages of the automation project.

The Evaluation Committee was established to evaluate the functional components of vendor responses to the RFP, and to evaluate the entire project.

The Barcoding Committee was formed to investigate the type of barcodes to be used and to plan the complete barcoding project at Provincial Library. This project involved the application of a barcode to 165,000 items.

The Evaluation Committee and Barcoding Committees were comprised of staff representing various work areas of the Provincial Library.

1.4 Methodology

To evaluate vendor responses, the Evaluation Committee first ranked the functions in order of priority. This ensured that the ranking of vendors corresponded with the needs and priorities of the Provincial Library.

The final ranking of vendor responses to the RFP occurred after demonstrations of the top three vendors.

The Provincial Library then started negotiations with the top ranked vendor, Dynix Library Systems Inc. After the contract was signed, hardware and software were installed.

The steps following installation were:

- Dynix implementation forms were completed;
- the existing catalogue records (from Utlas) were loaded onto Dynix;
- the Provincial Library staff was trained by Dynix;
- barcoding of the collection was then completed; and

- the staff worked on the backlog of unmatched barcodes and unbarcoded items.

Also, to use the circulation and acquisitions modules, over 300 patron records and over 400 acquisitions vendor records had to be loaded before the system was operational.

Support from Dynix throughout the implementation stage was important. Their staff was knowledgable and responsive to the Provincial Library's needs.

1.5 Benefits

The greatest gains in efficiency occurred in the circulation of individual items and groups or blocks of library materials. These efficiencies included the reduction of 292 hours per year on typing overdues, 120 hours per year of staff time on the compilation of statistics, and 43 hours per year on preparation of address labels. With the stroke of a wand across a barcode, the system links the circulation of an item to a borrower, counts the circulation by collection, automatically provides a due date, identifies a hold on an item, and automatically generates overdue notices and invoices.

Services to client libraries were also improved through automation of the circulation functions. The Dynix library system provides the Provincial Library with the ability:

- to circulate, renew, and send overdues for blocks as a group rather than as individual items;
- to renew loans by telephone;
- to place a hold on or recall a requested item from a block;
- to customize loan periods to meet the needs of client libraries;
- to place more than one hold per title per branch;
- to send overdue notices faster; and
- to provide faster turnaround time for interlibrary loan requests filled from Provincial Library's collection.

Other major benefits of the implementation of Dynix included:

- the provision of single source access to the up-to-date holdings of the Provincial Library including on-order items;
- the immediate identification of the status of an item (e.g. in circulation, on-order);
- improved access to the collections through title and subject keyword and boolean searching; and
- automated statistics gathering.

Furthermore, the implementation of the circulation module

replaced antiquated technology. Parts were no longer available for the Recordak machines used at the Provincial Library. Implementation of Dynix thus addressed a critical need for updated technology.

Access to and use of a library collection is important to get the best possible value for library collection expenditures. The implementation of Dynix provided the capacity for greater turnover of library materials. This maximizes the utilization of the collection thus realizing wider circulation per dollar spent on materials.

Adequate access to the Provincial Library's collections is particularly critical because of the specialized nature of the collections and because individual items increasingly represent items not owned by other libraries in Saskatchewan. Thus, the benefits of improved access accrue not only to the Provincial Library but also to all libraries which borrow from the Provincial Library.

Further, the hold and recall capabilities provided by Dynix improve access to materials not available in other Saskatchewan libraries and/or to materials not eligible for interlibrary loan outside the province.

Formerly, circulation policies were driven by the inadequacies of the manual circulation system rather than by the needs of client libraries. Now, with the implementation of Dynix, Provincial Library offers customized loan periods on request rather than inflexible loan periods. The former policy of placing only one hold per title per library system has been replaced with the ability to place more than one hold per branch library per title.

The primary gain from the integrated acquisitions function was the added ability to search the database and identify and place a hold on ordered and just received items. There was no measurable improvement in efficiency in the acquisitions function because it was already partially automated prior to the implementation of Dynix.

The annual operating costs of the former manual/Recordak/Wang systems were $12,800 per year. The annual operating cost of the Dynix system in the first year of operation was $25,500. By allocating the savings from the former systems to the cost of Dynix the actual added cost of automation to the Provincial Library was $12,700 in the year. In addition, the ratio of staff time required before and after automation for library activities improved: 292:0 for typing overdues, 14:1 for gathering statistics, 5:1 for renewing blocks, 5:1 for

invoicing for unreturned books, and 2:1 for placing and processing holds/reserves.

1.6 Conclusion

The automation project has fulfilled its main objective of automating a maximum number of the Provincial Library's functions. The Evaluation Committee concluded that the Dynix library system met the Provincial Library's automation needs as outlined in the Request For Proposal. While automation increased the Provincial Library's annual operating costs, the benefits accrued are well worth the additional $12,700.

This concludes the first phase of automation development outlined in the RFP. To test the suitability of the Dynix library system in a library network, the next stage of development requires automation of one or more regional libraries. It will then be possible to evaluate the network functions and identify the organization, policy, and service implications associated with delivery of services through an automated network.

2.0 ACKNOWLEDGEMENTS

As the author of this report I want to acknowledge the contribution the Evaluation Committee members made to the automation project. Further, I wish to thank the staff at the Provincial Library for the support they gave to the Committees in bringing the report to fruition. In particular, I want to mention the contribution made by Audrey Mark and Brett Balon who reviewed the report.

3.0 BACKGROUND

The project to automate the Provincial Library was designed to "test the concept of networked delivery of automated library services in a distributed database, distributed processing environment"[1] (or library network) and to evaluate the following key functions of the system:

- Catalogue support;
- Circulation;
- Acquisitions;
- Serials Control;
- Block Control;
- On-line Public Access Catalogue;
- Network Functions

The terms of reference for the Automation Project Evaluation Committee included:

- development of criteria for use within the Provincial Library in evaluating responses from potential vendors; and

- development of criteria and methodology for evaluation of the total project.

This report evaluates the above key functions excluding serials control and network functions, which are not yet implemented.

The Committee represented of members representing six work units of the Provincial Library: Pat MacKay, Acquisitions and Processing; Gail Mitchell, Catalogue Support Services; Marie Sakon, Reference and Circulation; Ved Arora and Florence Duesterbeck, Bibliographic services; Marilyn Jenkins, Special Services; Bertha Gulka, Administration; and Gloria Materi, Project Manager, Technical Services. The Committee was chaired by Joylene Campbell, Professional Services.

The process to develop criteria and to evaluate responses from library system vendors included the following steps. First, the Committee prepared a list of functions ranked in order of priority: catalogue support, circulation, block control, online public access catalogue, acquisitions, network communications, serials control.

Catalogue support was ranked highest because in an integrated system the catalogue drives the other functions.

Circulation and block control ranked high because they were a priority for both Provincial Library and for the regional

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[1] Pilot Library Automated Network System Design Document Summary, Saskatchewan Provincial Library, July 29, 1988.

library systems. For Provincial Library, the circulation functions offered the greatest opportunities for cost savings, savings in staff time, improved efficiency and improved service to patrons.

The online public access catalogue ranked next because it provided up-to-date, single search access to the collection for all staff.

Acquisitions ranked lower on the list of priorities because it was already partially automated at Provincial Library. However, having acquisitions as part of an integrated catalogue offered the opportunity to provide all staff with access to information on items on-order and just received.

Network communication ranked low because network software developments, initiated by National Library, were not yet available. The Committee felt that these developments would be an integral part of future network development in Saskatchewan.

Serials control ranked last because this function was a priority only for Provincial Library.

Second, the Committee identified mandatory and desirable requirements for each function. The requirements were weighted as mandatory, or high, medium, or low priority. After demonstrations of the systems, they were ranked according to how well they addressed Provincial Library's Request for Proposals. Provincial Library selected the Dynix Library System, as it most closely met Provincial Library's needs and priorities.

Dynix Library Systems, Inc., a wholly-owned subsidiary of Dynix - U.S., is headquartered in Waterloo, Ontario. Dynix is an integrated online system. The cataloguing module is the hub of the system which includes acquisitions, circulation, and the public access catalogue. The description of the Dynix Library System upon which this report is based is Release 120 of the Dynix system.

Dynix software runs on the Pick operating system. The Pick operating system is similar to UNIX and was selected by Dynix for its communications capabilities. It has a built-in report generator and relational data base. Pick is an "English-like" language which allows users to retrieve, update and manage information easily through local or remote on-line terminals. Hardware manufacturers supporting Dynix include Ultimate, IBM, Prime, Honeywell, DEC, and others.

Provincial Library's system is an Ultimate 3025 mini computer with 9 Wyse terminals, and 160,000 records. The modules used at present are: cataloguing, circulation, online public access catalogue, and acquisitions.

4.0 OBJECTIVE OF THE EVALUATION

This report assesses how well the implementation of the Dynix library system has met the automation needs of Provincial Library as described in the Request for Proposal (RFP) and the criteria used for selection of a vendor. It examines each of the following functions and subfunctions for changes in efficiency (time consumed for each function) and effectiveness (meeting the service needs of client libraries):

- Catalogue support;
- Circulation of individual items;
- Block Control;
- Circulation sub-functions
  - overdues;
  - address labels;
  - invoicing;
- Online Public Access Catalogue; and
- Acquisitions.

This report also examines how the implementation of Dynix has affected the service of providing bibliographies.

5.0 TRAINING/DOCUMENTATION/SYSTEM SUPPORT

5.1 Training

Some of the Provincial Library staff had experience using computers and automated databases prior to the implementation of Dynix. Typing was done on Wang word processors. Cataloguing staff searched Utlas. Interlibrary loans staff searched Utlas and Dobis. Reference staff conducted computer literature searches on computer databases. Circulation records were maintained at Westbridge. The acquisitions system was partially automated on a Wang.

This prior experience with computers was valuable during the implementation of Dynix. Staff knew that they would attain competence with the new system through patience and a willingness to explore its capabilities. For example, after the catalogue data was loaded from Utlas to Dynix, some staff experimented with searching the online catalogue before they received formal training.

The Dynix library system is easy to use. The menus are well organized and the prompts at the bottom of each page are self-explanatory. The help screens in the public access catalogue module are helpful. The only matter of concern is the lack of shortcuts available for experienced searchers. Staff would like to be able to bypass menus and chain search commands.

Dynix provided basic training on-site to Provincial Library staff in December, 1989. This involved two hours of training for each module: cataloguing, circulation, online public access catalogue, and acquisitions. Training occurred before the collections were barcoded. Thus, the training was not based on the Provincial Library database. The training was satisfactory. Staff felt that the training on searching the online catalogue, which was based solely on the training manual, could have been more in-depth. Staff also felt that it would have been desirable to have further training after the staff had experience using the system.

The three day training session was supplemented with training manuals for each module. Staff unanimously rated the quality of these training manuals as excellent. They continue to be used to train new staff.

Dynix planned to have five videocassette training tapes completed by the end of 1990 for the United States market. Further training tapes may be produced if the tapes are meeting clients' needs. Provincial Library is investigating purchasing these training tapes for the library science collection.

5.2 Documentation

Dynix provides the following User Manuals: New User, Cataloguing, Circulation, Circulation Reports (now called Reports Manual), Searching, Acquisitions, System Administrator. Staff rated the quality of the user manuals as good. These manuals provide clear, step-by-step instructions for experienced system users. They provide many examples and sample screens. Each chapter in each volume has a tab and an index. Glossaries are provided. Updates to each manual are provided with each new release of the system. The indexes are useful for locating the required subject.

The acquisitions user manual fails to identify hidden commands. Sometimes it is necessary to flip back and forth from a user manual to the system administrator manual because the user manual tells you how to do something but not why. However, Dynix has recognized these problems and a recent newsletter identifies the changes that are planned for the user manuals. This is an example of the responsiveness of Dynix to their customers.

Provincial Library has supplemented the Dynix Searching User Manual with an internally prepared user manual which provides information specific to the Provincial Library system. The contents include: log on and log off procedure, unlisted commands for searching, loan periods for types of material, and a list of Provincial Library collection codes.

All Dynix User Manuals are written in clear, easy-to-understand language and provide valuable support to system users.

To supplement the user manuals, Dynix plans to provide Quick Reference Cards for each module, as a separate purchase. Provincial Library had not evaluated these cards at the time this report was written.

Staff avidly read and value the newsletters from Dynix. **Dynix Dateline** is published quarterly. It provides articles highlighting libraries that are Dynix customers, information on module developments and other announcements, articles on Dynix personnel, and listings of libraries that have recently signed contracts with Dynix. **Dynix Dateline** communicates Dynix corporate philosophy and Dynix success stories and provides informative articles.

Global Update is a monthly newsletter providing practical advice from customer libraries on use of Dynix features, and technical information on topics such as maintenance of peripheral equipment and the advantages of the Pick database

management system for advanced communication abilities.

Dynix Dygest, a new publication, is targeted at Canadian customers. It "will be used to bring information to our clients, provide a spot for CANDU (Canadian Dynix Users Group) to inform their members of activities and give clients a forum for asking questions and getting answers."[2]

5.3 System Support

One of the conditions of a contract with Dynix is that Dynix be provided with the name of a single individual to deal with during the supply, delivery, installation and implementation of the system. The system administrator is responsible for: hardware/software monitoring and maintenance, system security, system back-up, system upgrades, troubleshooting, and is responsible for all communication with Dynix including involving staff in system decisions and communicating changes from Dynix.

The type of system support provided by Dynix depends on the stage of development the library is at. During the implementation phase, there was daily telephone communication between the Library's system administrator and the Dynix installation team assigned to handle Provincial Library's installation. Dynix now provides a 1-800 telephone number for a fee of $150 per month in the first 12 months after signing the contract and $50 per month thereafter.

Once installation was completed, Dynix system support was transferred to a Dynix support team. Electronic mail is the preferred method of communication for contact with the support team. This is the method of communication now used by Provincial Library, supplemented by long distance telephone calls for infrequent urgent matters.

During installation and since then, Dynix has responded promptly and courteously to all queries. This was particularly beneficial during the implementation phase.

The Canadian Dynix User Group (CANDU) organized in November, 1988, shares information among libraries which have the Dynix Library System and provides Dynix with recommendations for improvements to the system. The CANDU group prepares a list of enhancements, ranked in order of priority, that members would like for their Dynix systems.

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[2] Dynix Dygest, Vol.1, No. 1, Fall, 1990, pg.2

Provincial Library has established an on-going Dynix committee representing various work units of the Library to:

- communicate and problem-solve internal issues regarding Dynix;
- produce standardized Dynix procedures for applications which cross work areas, e.g. holds;
- provide articles on Dynix topics to the Library's newsletter;
- provide recommendations to management on policy changes after consulting with client libraries.

The committee is also responsible for preparation of a list in priority order of enhancement requests for the Project Manager to submit to the Canadian Dynix User Group.

To summarize, Provincial Library staff rated the training, documentation, and system support provided by Dynix as good to excellent. Dynix responds promptly and courteously to queries. The Provincial Library is quite satisfied with the training, documentation, and system support provided by the Dynix library system.

6.0 DESCRIPTION OF FUNCTIONS

6.1 Catalogue Support

6.1.1 Requirements for Catalogue Support

A catalogue describes each item in the collection so patrons can identify the item(s) most likely to meet their needs. The cataloguing support function supports the creation of a file of bibliographic records reflecting items in the Provincial Library collection by identifying records from a source file of bibliographic records (e.g. Utlas) that match items in the collection. Original cataloguing is completed and added to the file when no matching record is found.

Automation of the cataloguing support function was intended to provide, at a minimum, the following:

a) searching the catalogue of the library's holdings in designated fields;
b) identification of a matching record;
c) modification of an existing record or creation of a new record;
d) deletion of records;
e) downloading of records from Utlas;
f) output of individual records or groups of records in these media: cardstock, paper, microfiche, electronic formats;
g) provide management information on activities within the function.

In addition, the Library wanted an authority control facility that would:

- provide consistent terminology (e.g. names, series, subject headings);
- provide cross-references;
- prevent blind cross-references;
- provide immediate global updating of records linked to changed authority records.

6.1.2 Pre-Dynix Procedure

Provincial Library used Utlas, a bibliographic utility, as the source of cataloguing records. Cataloguing staff received the item and the order slip and searched on Utlas for a matching bibliographic record. The search was done by Library of Congress (LC) number, International Standard Book Number (ISBN), title, or author. If matching records were found, the searcher selected the desired record, preferring first, Saskatchewan public library records, second, source records

including Library of Congress and National Library records, and third, other selected library records. Editing of records was done on and offline by the searcher or cataloguer. The searcher added Provincial Library (as a location) to the record. This transferred the record into the Provincial Library file on Utlas. The shelf-list card was ordered at the same time. The shelf-list cards were filed upon receipt.

6.1.3 Problems with the Pre-Dynix Procedures

The problem with the Provincial Library catalogue before automation was the lack of access to post-1987 titles (that is, titles acquired after the microfiche catalogue was produced) and the lack of access by all staff to on-order and received titles. The consequences of these problems are described in sections 5.3 Online Public Access Catalogue and 5.4 Acquisitions. Before Dynix was implemented, Provincial Library catalogue records were in machine readable form (in Utlas), but Utlas is a bibliographic utility (a source of catalogue records) not an online integrated catalogue. Utlas was not accessible to all staff needing access to the Library's catalogue.

6.1.4 Post-Dynix Procedures

Cataloguing records continue to be retrieved from Utlas using the same procedures described in the section on pre-Dynix cataloguing procedure. There is, however, more work for technical services staff. They add an extra holding statement on Utlas, import and download records from Utlas to Dynix twice weekly, and delete acquisitions holdings records on Dynix. Technical services staff are also responsible for weekly back-up and file maintenance on Dynix.

Dynix has an authority control capability which automatically generates an author, subject and/or series authority record whenever a bibliographic record is created on the system. This allows global updates as well as cross-references.

6.1.5 Management Information and Reports

The Dynix management reports for catalogue support include:

- report of authority list which lists the authority record key and the authority record form for authors, subjects, and series. This report can be used to identify duplicate or similar authority forms;
- report of new authority forms which lists new authorities added since the last time the file of new authorities was cleared. This report can be used to ensure consistent

authority files.
- report of use statistics which lists items which have not been used since a specific date or fewer than a specified number of times. This report can be used to weed collections of little-used items.
- report of discarded holdings which lists holdings that have been discarded from the system. This report can be used for collection development or audit purposes.
- cataloguing reports list the number of bibliographic records and holdings records that have been added and deleted for each collection and each call number. This report allows a library to compare the use of materials (from circulation statistics) with areas of growth or diminution in the collection. Provincial Library does not use any of these reports at present.

6.1.6 Changes Resulting From Automation

Dynix has all the capabilities outlined in the requirements except the ability to identify a duplicate record. Dynix can be searched in designated fields; the Dynix system allows searching by:

- keyword: title, title series, subject, contents;
- authority: author, subject, series;
- exact match: ISBN, ISSN, barcode number, Library of Congress card number, OCLC number, WLN number, RLIN, GPO number, BIB number;
- other: Dewey Decimal call number, Library of Congress call number, alphabetical title.

Dynix allows modification of an existing record, creation of a new record, or deletion of a record. Records can be deleted individually or in a batch mode. Records can be downloaded from Utlas. Dynix records do not provide diacritics in French or other languages.

Dynix allows the output of individual records or groups of records in paper, magnetic tape, or electronic format. The magnetic tape can be used to produce microfiche, cardstock, or CD-ROM output. (This may involve using a vendor, depending on the format desired and the equipment/software available in a library.)

The cataloguing process has changed little since the implementation of Dynix. Catalogue data and shelf-list cards are still obtained from Utlas using the procedures outlined in the Pre-Dynix Procedures section.

Two changes in the cataloguing process are: (1) the additional

data added to the catalogue records, and, (2) the authority control capability. To find out how much time was required for the additional work done by technical services staff a sample of 100 records was timed. In this sample, the additional procedures required four minutes per record.

The implementation of a Dynix catalogue provided the ability to make global changes to authority records (because authority records are linked to bibliographic records). This will ensure a "cleaner" more consistent catalogue in the future and will make searching the catalogue easier.

Previous versions of the catalogue (e.g. microfiche) had cross-references. Dynix provides the ability to add cross-references which is important for subject access.

Cross-references can be obtained by either loading an external authority tape to Dynix, or by manually inputting them through a cataloguing terminal. Loading an external authority tape can create blind references, that is, references to subject headings that do not exist. Provincial Library is investigating the cost of loading the authority file from Utlas. In the meantime, cross-references are being created and manually added to Dynix on request from the Reference staff. Although the Provincial Library catalogue on Dynix has very few cross-references at present, this Dynix feature provides important potential for improved subject access to the Library's collections.

The Dynix online integrated catalogue has improved access by providing timely and complete catalogue information, including item status (on-order, in circulation, due date, hold, etc). Downloading catalogue records from Utlas requires an additional four minutes per title. However, the cataloguing function is the area in which there has been the least amount of change resulting from the implementation of Dynix.

6.2 Circulation Function

6.2.1 Circulation of Individual Items

6.2.1.1 Requirements for Circulation of Individual Items

A circulation system allows a library to loan an item and then retrieve the item by identifying who has each item. The circulation system then can generate notices to initiate the return of overdue materials. Renewals allow libraries to extend a loan period if no other patron has requested the item. Reserves (called holds on Dynix) are used to hold an item presently on loan, for the use of the next borrower.

Automation of the circulation function was intended to provide the following:

a) registration of library patrons;
b) record of patron, due date and item borrowed;
c) support return, reserves, renewal, overdue and loss sub-functions;
d) permit circulation of materials not owned by the circulating library;
e) provide management information on activities within the function.

Provincial Library wanted to be able to circulate all items using Dynix (catalogued, uncatalogued, owned and non-owned).

6.2.1.2 Pre-Dynix Procedure

The Recordak circulation system "took a picture" of the book card and the date due card (the "T-card" or transaction card) and the borrowing library's address label. The film recording the circulation transactions was developed into a roll of microfilm. Thus, the microfilm was a record of circulation transactions in consecutive sequence.

To renew a book in the Recordak system, the branch librarian had to return both the book card and the transaction card to Provincial Library.

To reserve an item that was in circulation, the procedures were:

- the call number was verified in the shelf list (to avoid placing items on reserve that the Library no longer owned);
- the reserve file was checked to see if the title was already on reserve, or see if there was a previous reserve for the same library system;

- a "dummy" was prepared, interfiled with books to be shelved, and shelved;
- the patron was notified that the item was on reserve - staff typed the notification on a form;
- the request was copied and the copy was returned with the reserve notification;
- the original reserve request was filed;
- the file was reviewed weekly and any reserves more than 6, 10, or 18 weeks old (for each loan period) were cancelled and the patron was notified.

6.2.1.3 Problems With Pre-Dynix Procedures

The Recordak circulation system recorded items loaned in consecutive sequence; therefore Library staff could not identify who had borrowed an item, or if a particular item has been lent.

Use of transaction cards increased the chance of error because:

- sometimes the transaction card was not returned with the book so it was impossible to cancel the circulation record;
- sometimes the transaction card in the book did not match the book. This occurred when branch library staff removed the transaction card from the book and accidentally mis-matched them before returning them;
- if the transaction card did not match the book the error could not be detected. The cancelled transaction was incorrect thus an item remained overdue and, another record was incorrectly cancelled for an item which was still in circulation. Also, recalling specific items was not possible with the Recordak system. With the Recordak system, branch libraries could not be informed what items they had on loan.

Library staff set up manual circulation procedures for certain kind of materials. For example, borrowers often required library science material for extended periods of time (to plan workshops or prepare reports) so staff set up a manual circulation system for library science materials.

The manual circulation file for library science materials achieved three objectives. It provided the Library an opportunity to place a short term loan period on some high demand items from the library science collection. It provided borrowers with a long term loan for some items without the generation of needless overdue notices. It also identified the borrower (information not available from the Recordak system), providing an opportunity to manually recall items if required to fill other requests. However, staff time was consumed

maintaining the file.

The method of renewing items using the Recordak circulation system was not satisfactory to the borrowing branch libraries because:

- both the book card and transaction card had to be returned to Provincial Library by mail, subsequently renewals could not be handled over the telephone;
- Provincial Library could not immediately inform a branch library if the request for renewal would be denied (because another patron had reserved the item).

In some cases, the requests for renewal and cards were not received by Provincial Library or the branch did not receive the renewal cards with new due dates from Provincial Library.

The manual reserve system was unsatisfactory because a "dummy" had to be made and shelved, and when an item was returned, the reserve would not be identified until the "dummy" and item were matched at the point of shelving. If a "dummy" was shelved incorrectly, it was not found when the item was returned. Alternatively, if a returned item was shelved incorrectly, the "dummy" was not found. In either case, the reserve would remain unfilled and be cancelled after a six week period, resulting in frustrated patrons.

Also, since Library staff did not know the due date for materials, they could not make an informed decision about whether to place a reserve on a requested item (which might soon be returned) or search for an alternate location.

6.2.1.4 Post-Dynix Procedures

All library materials now circulate using Dynix. All new catalogued materials are assigned a barcode during processing. The barcodes are scanned to lend specific items to a borrowing branch. The Dynix response to the RFP stated that:

> "The bibliographic data base is capable of handling brief records for items not fully catalogued, as well as for materials for which full catalogue records are not assigned for purposes of circulation control."

Provincial Library uses this capability for items which are not included in the database and thus do not have barcodes. Uncatalogued items include parts of the multilingual collection, individual issues of periodicals (from the library

science or government documents collection), and vertical file materials. These items are circulated using either the Dynix "fast add" feature or using the "group check-out" feature. Individual items are circulated using "fast add" by attaching a barcode, scanning the barcode, and keying in the title, collection code, call number and item type. This "fast add" data may be retained indefinitely in the circulation module for future circulations of the same item. "Group check-out" is used for a group of materials which do not need to be each identified uniquely (usually for two or more items from the vertical files). Items are placed in barcoded folders, the barcodes are scanned, and the title (or subject heading of the vertical file), collection, item type, and number of items are keyed in by the operator. "Group check-out" data is retained only for the current circulation.

In addition, Dynix is used to circulate items borrowed from other libraries. This identifies items loaned to Provincial Library for staff and for other Saskatchewan borrowers and allows Provincial Library to generate overdue notices for items not in its own collection. This feature is used to circulate talking books borrowed from out-of-province libraries for Saskatchewan branch libraries.

The Library's borrowers files consist of the complete mailing address for three hundred branch libraries in Saskatchewan, some special and government libraries, and bookmobile borrowers. One feature that Provincial Library wanted in a circulation system was fast easy access to the borrowers file by keying in the first few letters of the borrower name rather than the full name. This was important because the Library is not a public access library where patrons present a barcoded borrower's card as the fast method of identifying the borrower. Dynix provided this feature.

When Provincial Library receives a request for an item that is on loan, a hold (formerly called a reserve) is placed against that item to ensure that it is sent to the requesting branch library after it is returned to Provincial Library. Holds may be placed against catalogued items, items on-order, items received, items already on hold, and items in mending/bindery. A feature that Provincial Library wanted was a circulation system that allowed staff to change, cancel, or override hold queries. These are possible on Dynix.

When a hold is placed, staff add the interlibrary loan request number and the name of the individual patron to the hold record, and print a copy of the hold screen. The copy of the hold screen and the original request are sent to the branch library. Thus, the requesting branch library is advised of:

the author, title, date of cancellation of the hold, the interlibrary loan request number, and the name of the individual patron who initiated the request. 1,427 holds were placed between April 1, 1990 and December 31, 1990.

6.2.1.5 Management Information and Reports

Provincial Library staff completed a Collection Policy in March, 1989 and a supplemental collection development plan in the summer of 1989. The collection development plan provides detail on collection strengths and weaknesses and targets specific categories of the collection for development on an annual basis. Circulation statistics provide management information for collection planning and for budgeting and selection purposes. Thus, the implementation of an automated circulation system supports the achievement of collection objectives.

The Recordak circulation system provided a gross total of items circulated, calculated by subtracting the beginning transaction card number from the final transaction card number on each Recordak machine. Circulation of uncatalogued items (e.g. government documents, vertical files) was recorded manually.

However, in order to provide subtotals by collection (e.g. large print, talking book, library science, multilingual) every item circulated by Recordak had to be counted manually. The manual circulation count required an estimated 100 minutes per week. The preparation of statistics sheets and the daily and weekly tabulation of results required an additional 40 minutes per week. An hour per month was spent computing and preparing monthly totals by collection. An estimated 129 staff hours per year were spent collecting and maintaining circulation statistics.

In addition to requiring almost one person-month of staff time, the manual statistics system was also subject to the usual vagaries of a manual counting system. Items could be missed or allocated incorrectly. The manual system limited the amount of refinement possible in data allocation. For example, because of the staff time that would have been consumed, it was not possible to have a Dewey classification breakdown of circulation in each collection.

The Dynix system automatically counts circulation as the barcode of each item is scanned. The Library determines the amount of detail desired in circulation statistics. Circulation statistics produced for Provincial Library are reported by collection subdivided by Dewey decimal classification, and, provide totals by library system. The

ability to count circulation by a range of call numbers specified by the library will be useful for collection development.

The monthly reports provide circulation data for the current month, the previous month, the percentage change, the data for the same month in the previous year, the percentage change, the current year-to-date total, the previous year-to-date total and the percentage change.

Dynix circulation reports for Provincial Library provide the circulation count only for the subdivided Dewey classifications of each collection; Dynix does not provide the totals for each collection. Provincial Library made the decision to identify the most discreet data possible, knowing that compilation of month by month totals for each collection could be handled using a Lotus 1-2-3 program. (See examples of Lotus circulation compilation in Appendix B). Initiating the monthly Dynix circulation reports requires five minutes per month. Staff time to prepare the cumulated totals on Lotus requires approximately 40 minutes per month. With Dynix, statistical reports require 9 hours per year of staff time. This improvement saves 120 staff hours per year.

Dynix also counts the number of times an individual item has circulated. Provincial Library staff plan to use this information for weeding the collections, particularly the library science and alternate format collections.

Dynix reports also provide:

- the number of holds placed;
- the number of holds cancelled;
- the number of holds filled;
- the number of holds expired;
- the number of recall notices sent; and
- the number of telephone renewals.

Dynix provides a purchase alert report which is triggered by the ratio of holds to available copies of a particular title. The report can be used by staff to decide when to order more copies of a title. Additional copies can be ordered when a selected threshold of holds is reached. This allows a library to respond quickly to public demand for a title, and also to relate the number of duplicate copies ordered to the extent of the demand. While Provincial Library orders duplicate copies only for certain collections, the purchase alert report is useful to Provincial Library to make informed decisions about ordering duplicate copies or additional titles in the same subject for those collections.

Dynix produces a trace report which lists items that are not in circulation but cannot be found on the shelves. This report can be used to reorder or delete items from the catalogue that have been missing for a long time and to check if an item was returned to the shelves bypassing checkin. This is critical to maintaining a current catalogue and for interlibrary loan purposes.

6.2.1.6 Changes Resulting From Automation

The Dynix system met most of the requirements for the circulation function: registration of library patrons; record of patron, due date and item borrowed; support of return, reserve, and renewal, sub-functions. (Overdues and invoicing/loss sub-functions are examined in other sections of this report.) The Dynix system permits circulation of all materials loaned by Provincial Library (catalogued, non-catalogued, owned and not owned). Circulation response time is fast. Management information reports provide detailed records of circulation by collection and the activity in each of the sub-functions.

The RFP stated that Provincial Library loans items to branch libraries within the library systems and to other libraries. It indicated that Provincial Library wanted long-term patron records comprising branch name, system name, and address, with a short-term record of the personal name attached to individual items loaned. Dynix can record personal names of individual borrowers. However, in practical terms, this would have required creating a long-term patron record for each individual patron in Saskatchewan rather than a short-term record linked to branch libraries as the patron record. Therefore, Provincial Library decided to create patron records for branch libraries rather than each individual patron in the province. The ability to link a short term record of individual patrons with a branch library was the only key specification in the RFP that Dynix did not meet. However, the other vendors did not offer this capability either.

One feature of Dynix patron records which Provincial Library has appreciated is that the library determines all elements of the patron record rather than using a template. The Dynix patron records provide complete mailing addresses for each branch library; these addresses are used for the generation of address labels, as described in section 5.2.3.2 Address Labels.

Automation of the circulation function eliminated 5 files: the reserve file and 4 manual loan files (short loan file, interlibrary loan file, library science loan file, and in-house permanent loans to specific work areas).

To examine efficiency of the circulation function, Library staff timed circulation functions before and after the implementation of Dynix, as outlined below:

Comparison of Staff Time Required for Circulation of Individual Items

	Recordak	Dynix
- circulation	21.6 seconds/item	32 seconds/item
- renewal	1 min 11 sec/item	1 min 45 sec/item
- place reserve/hold	2 min 32 sec/reserve	1 min 30 sec/hold
- process reserve/hold	2 min/reserve	1 min 15 sec/hold
- statistical reports	129 hours/year	9 hours/year

The most significant improvement resulting from automation of the circulation function is that Dynix automatically counts circulation. With the stroke of a wand across a barcode, the system links the circulation of a particular item to a specific branch library, counts the circulation by collection, automatically provides a due date, identifies if the item has a hold on it, and automatically generates overdue notices and invoices when appropriate. This saved 120 staff hours per year formerly used to compile circulation statistics.

One of the benefits of the automated circulation system is the ability to identify and locate missing items. Prior to automation, if an item was not found on the shelves, there was no way to confirm whether or not it had been borrowed and would be returned in a specific period of time. As a result, staff did not attempt follow-up except to place a reserve on it. If a requested item was in limbo for months, patrons may no longer have required the items when they were located.

Now, if an item is not identified as in circulation on the database, and not found on the shelves, staff are aware with certainty that there is a problem and can assign a trace status and/or immediately take suitable action to locate the item. This has enhanced the Library's ability to respond to client's requests.

Provincial Library now has accurate information on collection sizes, for all collections except the multilingual collection, rather than estimates based on shelf-list counts. (Although the multilingual collection is catalogued, not all multilingual records are in the Utlas database. The retrospective conversion of the multilingual collection is not completed yet.)

In addition, the Dynix circulation system can identify to which

branch library an item was last circulated. This was not possible using Recordak.

The Dynix circulation system improved service because loan periods can be customized to the needs of borrowers. Dynix allows the operator to specify a loan period (under 365 days), upon request. This is a significant service improvement because it allows the borrower to determine the length of the loan period, and it eliminates unnecessary overdue notices. Although this feature can be used for any material, customized loan periods are especially useful for multilingual blocks, language learning tapes, and library science materials.

Provincial Library anticipates a decrease in circulation statistics as a result of this change. Formerly, the longest loan period, 4 months, was used for multilingual blocks. Multilingual blocks, which often consist of 100 books, can now be loaned for 364 days. Thus, the circulation for such a block for a year, formerly 300, would now be 100. Multilingual materials represent approximately 40 percent of the Library's circulation, so this change may produce a significant decrease in circulation statistics as well as improved service to client libraries.

Client libraries are appreciating the ability to renew loans by phone. Provincial Library renewed 11,586 items by telephone in the period April 1, 1990 to December 31, 1990.

Service has also been improved in the area of holds/reserves. With the old system it was only possible to place one hold per title per region. With Dynix, the Library can place more than one hold per title per branch. As the use of the collection improves through improved access, this improvement in ability to place holds will become even more significant.

Problems were identified in the early months after automation and appropriate policies and procedures were revised. For example, Provincial Library started adding the patron name, in addition to the interlibrary loan request number, to hold notices when client libraries identified this as a need.

The Evaluation Committee identified back-up for the circulation function when the system is down as a desirable system feature since no system is operational 100% of the time. Dynix offers a battery-operated handheld terminal, called Telxon, for checkin and checkout during system failures (or to record bookmobile circulation). Barcodes are scanned or entered manually and then transferred to the computer to link with matching bibliographic records. Provincial Library has

not yet obtained or tested one of these devices.

Furthermore, the implementation of the circulation module replaced antiquated technology. Parts were no longer available for the Recordak machines used at Provincial Library. Implementation of Dynix thus addressed a critical need for updated technology.

To summarize, Dynix met Provincial Library's requirements for a circulation system as outlined in the RFP. The system allows Provincial Library to register branch libraries as patrons, and to record the borrower, due date and item borrowed. The system supports holds on individual items, renewals, overdues, and invoicing activities. It permits circulation of uncatalogued items and materials not owned by the Library. In particular, it provides useful circulation statistics as part of the circulation function and saves 120 staff hours per year on the collection of statistics.

6.2.2 Block Control

6.2.2.1 Requirements for Block Control

Block control allows Provincial Library to loan and renew materials as a group. Provincial Library circulates the following types of material in blocks: multilingual materials, talking books, non-fiction and juvenile large print books, slow speed audio tapes, and print/braille.

Automation of the block control function was intended to provide, at a minimum:

a) identification of items in the collection appropriate to the parameters set by the requesting location (to tailor-make blocks);
b) record of location and due date for both the block as a whole, and individual items within the block;
c) support of return, renewal, overdue and loss sub-functions for both the block as a whole and individual items within the block;
d) management information on activities within the function.

The Evaluation Committee had identified the following as desirable features for block control:

- the ability to perform circulation functions (such as: recall, renewal, overdues) on the block in one transaction without items in hand;
- the ability to rotate a block (change library name) for a complete block or individual items without items in hand; and
- the ability to recall specific items from a block (for interlibrary loan requests).

6.2.2.2 Pre-Dynix Block Procedures

Circulating a group of items, called a block, using Recordak was exactly the same as circulating individual items. That is, a group of books were not identified as a group; there was no block number assigned to the group. Renewing a block involved renewing each item individually.

6.2.2.3 Problems with Pre-Dynix Procedures

Because the Recordak system did not allow access to circulation information by borrower or by item, it was impossible to:

- identify which items were in a block;
- recall specific items in a block;

- renew a block as a group (rather than each individual item); or,
- renew a block over the telephone.

Blocks of multilingual books often exceed 100 or more items. If a borrowing library wanted a multilingual block renewed, it had to collect 100 transaction cards and matching book cards from each of the books and send them to Provincial Library where staff renewed each item individually.

Also, the Recordak system did not allow the loan of blocks for periods longer than the standard block loan period without a cumbersome and time-consuming renewal process.

6.2.2.4 Post-Dynix Procedures

To loan a block of materials using Dynix, the block is assigned a block number which becomes part of the patron record, e.g. "MELVILLE LIB BL 10815". The block number assigned represents the type of material in the block. For example, the "10" at the beginning of the Melville block identifies the block as a multilingual block. The barcode of each item is scanned, linking each item to that patron record (block number). Thus, the system treats the group of items as a unit for circulation and renewal. It is also possible to place a hold on an individual title or recall a single title in a block.

If Provincial Library receives a request for an item that is on loan in a block it can be recalled if the item is on the shelves when the branch library receives the recall notice. An item is only recalled from a block if the due date is not within seven days of the day the recall is initiated. The recall notice is printed as part of the printing of mailers resulting from day-end processing. Recalls were initiated for 28 items between October 1, 1990 and December 31, 1990.

Staff examined 12 items being recalled from talking book blocks to see how much faster a recall is than simply waiting until the item was returned on the due date. 9 of the 12 items were returned on the basis of the recall notice, in an average of 8.7 days. (The other 3 items were in circulation in the branch library.) If the items had been returned on the due date, the length of time for them to have been returned would have been an average of 25.7 days. For these items, the ability to recall the talking books reduced turnaround time to the patron by an average of 17 days. This increases usage of materials thus giving better value for funds spent on materials and improves service to the individual placing the request.

A block can now be renewed over the telephone simply by

identifying the borrowing branch and the block number(s). Staff can renew the block, and identify any items which cannot be renewed (because of a hold) and which must be returned to Provincial Library. If a renewal request is received by mail, and if the block includes an item or items with a hold, the operator takes a print of the screen, highlights the item(s) to be returned, and puts it in a mailing envelope. The time required to renew a block is dependent on the number of items in the block because the computer changes the due date for each item individually.

A major portion of the blocks issued by Provincial Library are from the multilingual collection. About fifty percent of the multilingual collection is not converted to machine readable records and therefore is not in the Dynix database. That represents approximately 35,000 multilingual items. To circulate items that are not in the Dynix database, either the catalogue records must be added to the database, or the item must be circulated as an uncatalogued item. Circulation of an uncatalogued item takes longer because it involves manually entering descriptive data instead of simply scanning the barcode.

The latter method of circulation was the sole method used by Provincial Library for multilingual materials not included in the database for a brief period of time after implementation of Dynix system. That method was so time-consuming that Provincial Library now uses a combination of the two methods. Therefore, to achieve the greatest efficiencies in the circulation function, a retrospective conversion should include all records for items which the library wishes to circulate (especially block materials).

6.2.2.5 Management Information and Reports

Dynix has the capability to produce several reports related to blocks. The block can be listed, on request, in the circulation module. The list on the screen includes the barcode number, the title, and the due date. If a paper copy of the list is required, the screen can immediately be printed from a terminal that has a printer attached. (See Appendix C for an example of a block list.)

Provincial Library registers each block (branch name and block number) as a patron for circulation purposes. Patrons can be grouped by library system for statistical purposes. As of November 1, 1990, circulation statistics identify the number of books circulated in blocks to each library system. It also identifies the number of new blocks registered each month. It does not identify the total number of blocks being created

yearly, but this number can be obtained by totalling the number of new blocks created each month.

Recalls from blocks are not included in the purchase alert report described in the circulation function section. However, a report of items recalled can be printed. This weekly report identifies items in demand and orders can be initiated for additional copies if desired.

6.2.2.6 Changes Resulting From Automation

Dynix met all requirements for block control except the ability to tailor-make blocks. The capability to tailor-make blocks had not been seen (by the Evaluation Committee or the Steering Committee) as a higher priority than getting a better system overall. Dynix offered the capability to circulate groups of items in blocks.

To examine efficiency, Library staff sampled the amount of staff time required for parts of the block control system before and after automation. The results were as follows:

Comparison of Staff Time Required for Circulation of Blocks

	Recordak	Dynix
- circulation	6 min 20 sec/block	5 min 48 sec/block
- renewals	15 minutes/block	2 min 45 sec/block

The time required for both circulation and renewal of blocks was reduced.

The ability to recall an item from a block is important because it may be sitting on a shelf in a branch library not being used. It is equally important to be able to recall items loaned through individual circulation. The ability to recall is especially important: (1) when Provincial Library is the only library in Saskatchewan that owns the item, and (2) for materials that cannot be requested on interlibrary loan outside the province. Also, analysis of requests for multilingual materials shows a trend toward more requests for specific titles, so the ability to recall specific titles is an important factor in the multilingual service Provincial Library can provide.

Client libraries prefer not to receive items they have had in previous blocks. As before, staff check the book card for the branch name and refrain from sending items to branches that have had the item previously. This element of the service continues unchanged.

It should be noted that the Dynix system retains historical circulation information on the last patron (branch library) each item was circulated to, as long as the patron record for that block is retained. However, this would not be a practical method for refraining from sending the same title back to a branch because: (1) patron records for blocks would have to be retained almost indefinitely thus using up valuable CPU space in the computer, and (2) the last patron information would not be discovered until the block was at the terminal being circulated. Dynix identifies the most recent last patron for that particular copy. Dynix provides the ability to find out the last patron information of other copies of the same title before circulation, but the procedures to achieve this would be very time-consuming.

To provide good service, Provincial Library wanted the ability to move blocks from one branch to another, without requiring that the block be returned to the Library. This was expressed as the need for a block circulation system that had the ability to rotate the block (change library name) without items in hand. There are two options to achieve this on Dynix. The patron record can be called up and revised. This is the simplest method but results in the loss of the historical circulation (last patron) information for each item in that block. The other option is to checkin the block, create the new patron record, and key in each of the barcode numbers for that block to the new patron record. This retains the historical circulation information for each item but requires more staff time than the first option and provides more opportunity for errors in keying barcode numbers.

To summarize, the major benefit of automation for circulation of blocks is that Dynix can treat a group of items as a block for renewal or overdue purposes, and it is possible to place a hold on an item or recall an item from a block without disturbing the remainder of the block. For borrowing branch libraries, the major benefit is the ability to renew a block simply by identifying the branch and block number and the ability to do so by telephone if desired.

6.2.3. Circulation Sub-Functions

6.2.3.1 Overdues

a) Requirements for Overdues

Overdues remind the borrowing library that items are outstanding and encourage the return of materials to make them available to other borrowers.

The feature Provincial Library wanted in the overdues sub-function was the automatic generation of mail-ready overdue notices including: name and address of borrower, call number, author, title, publisher, publication date, due date. A grace period before overdues were generated was also desired.

b) Pre-Dynix Procedure

The Recordak overdues procedure involved a number of steps. On a weekly basis, the transaction cards were sent to Westbridge Computer Corporation. Westbridge generated a computer report recording all circulation transactions generated, and all transactions cancelled (because items had been returned). Provincial Library staff spent time sorting and manually cancelling the overdue transaction cards for items returned after the overdue report from Westbridge was received.

The film which recorded the circulation transaction was also processed into a microfilm on a weekly basis. Overdue items were identified by comparing the microfilm of circulation transactions with the computer report of items not returned. An overdue notice was typed for items not returned.

c) Problems With Pre-Dynix Procedures

The overdues procedure was slow, cumbersome, inefficient and costly because:

- there was no access to circulation records by title or by borrowing library;
- films were lost in the mail so overdue data was lost;
- films were poorly processed (under or over exposed) resulting in lost data and/or eyestrain;
- the computer report procedure cost $11,267 in 1989/90 for: transaction cards ($7,564), Westbridge card sorting and program maintenance ($3,600), and film processing ($103); there was an additional annual cost of $146 for the films;
- sometimes the films were as much as two weeks late so overdues were backed up. In those cases, transaction cards had to be manually cancelled.

Also, computer cards were wasted because when computer cards were ordered a year in advance, an estimate of the number of cards required per week (coded and due dated for that week) was sometimes higher than the number actually used. Sometimes hundreds of cards were discarded because they were not used that week. Other weeks required "borrowing ahead" when not enough cards had been ordered.

d) Post Dynix Procedures

Overdue notices are printed daily by Dynix in the morning as a result of the previous evening's day-end processing. The first overdue notice is printed 7 days after the due date; the final notice is printed 21 days after the due date. Thus, the interval between notices is 14 days. The Dynix system allows the Library to determine these time periods and the wording of the overdue notice. An adjustment has been made to the time periods for printing overdues since Dynix was implemented.

For Provincial Library, the Dynix mailer for the first overdue notice lists the call number, title, barcode number, and due date of the overdue item(s). It also advises how many other items are overdue. The final overdue notice includes the same information plus the replacement cost of the overdue item(s). Overdue notices for blocks list: the call numbers, the titles, the barcode numbers, and the due date. (See Appendix D for an example of an block overdue notice.)

Some staff time is still required for the overdues process. Circulation staff separate the overdues "top copy" from the Dynix mailer. Problems with the notices can be quickly identified from this "top copy". Overdues for blocks usually require more than one Dynix mailer to list all the titles in the block. To ensure that the borrowing branch library receives the overdue notice for the complete block at the same time, the mailers are grouped by borrowing library for block overdues notices only, put into an envelope, and a mailing label applied for mailing. Stapling mailers together was discontinued at the request of Canada Post.

Although the reason for grouping mailers was for the convenience of branch library staff, there are also associated savings in postage.

e) Management Information and Reports

A list of past due items is generated monthly to assist collection management. Thus, items long overdue or lost can be replaced quickly.

A report of overdues can be printed in shelf-list sequence to do a shelf check for items that may have bypassed checkin and been shelved. This report called "shelf-list of items on current overdue notices" lists only the items that became overdue the day it was run; it does not cumulate.

f) Changes Resulting From Automation

Dynix met the requirement for the overdues sub-function, the automatic generation of mail-ready overdue notices. Provincial Library decided not to include author, publisher, and date of publication on overdue notices (as listed in the requirements) because the lengthier the data on each item, the fewer items that can be listed on each overdue mailer. The Library decided that title, call number, barcode number, and due date was sufficient information to identify the overdue item. Thus, the Library uses as few mailers as possible. Dynix does allow a library-specified grace period.

Prior to automation, overdue notices were sent 4 weeks after the due date. Now, the first overdue notice is sent 7 days after the due date and the second overdue notice is sent 21 days after the due date. Thus, the overdue period is expressed in days rather than weeks, and the time period before sending the first overdue notice has been reduced by 3 weeks.

Library staff timed a sample of overdues before and after the implementation of Dynix. Prior to automation, Library staff spent one hour, seven minutes per week, or 58 hours per year manually cancelling overdue transaction cards for items returned after the overdue report was prepared. An additional 292 hours were spent typing overdues. After automation, the procedure of separating "top copy" from mailers and sorting of mailers by branch library required 58 minutes per week or 50 hours per year. Thus, the automation of overdues saved 292 hours per year of staff time for typing overdues, and saved 8 hours per year for additional activities related to overdues. The total savings in staff time for the overdues process was 300 hours per year.

Record-keeping using Dynix is more accurate than the Recordak system, so statistics are more reliable. Since microfilms containing circulation records are no longer lost in the mail, the loss rate may be lower.

The implementation of Dynix resulted in an annual savings of $11,400 for transaction cards, films and processing, and staff time savings of 300 hours per year. The annual cost of Dynix mailers for overdues, recalls and invoices is approximately $500 per year. Thus, the saving in operating costs in relation

to the circulation module was approximately $11,000 per year. This saving is being applied to the annual maintenance costs for Dynix.

6.2.3.2 Address Labels

a) Requirements for Address Labels

Address labels are required to mail items to the 300 branch libraries and other libraries which use the Provincial Library collections.

One of the features Provincial Library wanted from an automated system was the ability to automatically generate mailing labels based on the address in the borrowers file and display the address before printing the mailing label. Using the address information in the borrowers file to generate address labels was important to Provincial Library because ninety percent of items circulated from the Provincial Library are sent by mail and require address labels. The remainder, sent by courier or government mail, do not require address labels.

b) Pre-Dynix Procedure

Address labels were printed in bulk using the Wang word processing system. A list of approximately 380 libraries' mailing addresses was created on the Wang. Address labels were printed by the Wang 25 at a time for each library. The Wang system required that a staff member be present to initiate each set of 25 labels.

Due to Canada Post regulations, different labels are required for different types of materials. Books are mailed using first or fourth class mail. The system was used to prepare three types of labels: brown labels for library books only, and yellow labels and white labels for out-going items other than library books.

Addresses were printed directly onto brown labels. Other labels required printing the address onto a white label, removing it from the backing paper and applying it to the correct coloured label.

Circulation staff initiated the request for labels and cut the labels down to size. Administration staff printed the labels on the Wang computer.

c) Problems with Pre-Dynix Procedures

Maintaining the address label files was very time consuming. The procedure required six steps accomplished by six different individuals to replenish a file. The number of individuals involved in the process increased the opportunity for error.

The number of address labels required was estimated. This sometimes resulted in too many or insufficient labels in supply for any individual branch.

d) Post Dynix Procedures

Address labels are generated from the addresses in the patron record file at the time the item is circulated. The prompts on the screen allow staff to specify if the label is to be first class and the number of labels to be printed. If the label is for a block, the block number is included on the label. Labels must be loaded to the printer each morning and removed at the end of each day to avoid problems with the continuous feed mechanism.

e) Changes Resulting From Automation

Over a period of a year, approximately 12,000 labels were printed. A sample taken prior to automation indicated that the staff time required for the mailing label system was 63 hours per year. The Dynix address label procedures require 20 hours per year of staff time.

Thus, implementation of automated label printing eliminated two manual files and saved 43 hours of staff time for printing labels. Service improved because the opportunity for error in printing and applying incorrect mailing labels was eliminated. This benefits branch libraries who formerly spent time returning books sent to them in error.

This procedure also saves funds. The former labels cost 5 cents per label. The labels used with Dynix cost less than 3 cents per label. At approximately 12,000 labels per year, this saves approximately $240 per year. There may be some additional savings because the Dynix system prints the exact number of labels required. The former system used estimates, so address changes occasionally resulted in the discard of labels with old addresses.

The move to automated printing of address labels is a change that administration and circulation staff greatly appreciate.

6.2.3.3 Invoicing For Unreturned Books

a) Requirements for Invoicing

The invoicing sub-function allows Provincial Library to send invoices for material not returned by the borrowing library and provides the borrowing library with one last opportunity to return borrowed items.

The features Provincial Library required from an invoicing sub-function were the automatic generation of invoices including the replacement cost for each item and the total invoice, by library system. The Library wanted a list of invoiced items, in call number sequence to check shelves and to make decisions regarding possible replacement of the items.

b) Pre-Dynix Procedure

The Westbridge computer reported the numbers of all transactions that remained overdue six months after the first notice.

Materials not returned were invoiced as follows: vertical files-$3, adult books-$25, expensive materials-actual cost.

Overdue items were cumulated for three months prior to invoicing. In the three month sample period, of the 230 items which were overdue, 34 were found on the shelf and 93 had been returned, leaving 103 that were invoiced. The staff time required for the invoicing process included file maintenance, the shelf search, and typing and sending the invoices.

c) Problems with Pre-Dynix Procedures

The weakness of the former invoicing system was the amount of staff time spent and the inability to identify the status of overdue material. It was possible for material to be returned without a transaction card and be in circulation when the shelf check was done thereby eluding the effort to prevent invoicing of returned items.

It was only practical to invoice every three months because of the staff time involved. Also, the Westbridge system did not allow invoicing on request when the patron reported an item lost, an inconvenience to branch librarians.

d) Post Dynix Procedures

Invoices for unreturned overdue materials are printed daily by Dynix in the morning as a result of the previous evening's day-

end processing. The invoice is generated 180 days after the due date of the overdue item, when an item is reported lost, or at any time, on request. Items are now invoiced at actual cost for material purchased since the implementation of Dynix. The invoicing amount for materials purchased prior to the implementation of Dynix remains as listed earlier. In other words, if an actual cost is not indicated in the item record the computer defaults to the amounts listed. Thus, invoicing for materials not returned is now item specific.

One feature of Dynix is that the wording of the invoice and the time period before the invoice is sent, i.e. 180 days, are determined by the library. For Provincial Library, the Dynix mailer for the invoice includes the title, barcode number, and the replacement amount owing. It does not include the individual patron's name because of Provincial Library's decision to record circulation of materials to branch libraries, not individual patrons.

Each day the Dynix mailers are separated (top copy from mailing copy) and sorted. The top copy of invoices are sorted and filed by library system, until payment is received. When the corresponding cheque arrives, payment is recorded on Dynix and the cheque is forwarded with the top copy of the invoice to the Administration Section to handle the accounting. When the cheque arrives, the shelf is checked to ensure that the item has not been returned, then, the cheque is entered as received, on Dynix.

When an invoice is prepared for an item, the status of the item is immediately and automatically changed to reflect its new status of "reported lost".

e) Management Information and Reports

Dynix reports provide the number of items for which invoices were sent (billing items) and the number of invoice notices sent (billing invoices), on a monthly and year-to-date basis. Invoice notices may include more than one item, so these two figures will differ.

Dynix reports also provide data on the dollar value of items for which invoices were sent, the amount of funds collected for lost books, and the amount of funds waived. A report on the items with the status of "reported lost" is printed (usually monthly) to allow library staff to initiate a replacement order if desired.

f) Changes Resulting From Automation

Dynix met the requirements of Provincial Library by providing automatic generation of invoices including an assigned replacement cost. However, invoices are sent to the borrowing library rather than to the library system head office. Dynix does produce a list of invoiced items in call number order.

Before automation, the procedure of doing the shelf check, typing, and sending invoices required 18 hours for every three month period, or 72 hours per year. The Dynix invoicing procedure also includes a shelf check, but the procedure requires only 3.5 hours for every three month period or 14 hours per year. Thus, automated invoicing saves approximately 58 staff hours per year.

6.3 Online Public Access Catalogue

6.3.1 Requirements for Online Public Access Catalogue

The Provincial Library catalogue is searched to locate a specific item or to find out if the Library has information on a subject.

The automated public access catalogue was intended to provide, at a minimum, the following:

a) display of designated elements of the full catalogue record, on-order records, location by branch or special collection, and circulation status of an item;
b) permit keyword and boolean searching of and across designated fields of the catalogue record;
c) provide user-friendly screens and prompts;
d) provide management information on activities within the function.

Provincial Library had also defined the following as desirable features for an online catalogue: automatic and explicit (command) truncation, ability to browse authority records, ability to limit a search (e.g. by date, language, or type of collection), for experienced searchers the option to override menu searching and do command searching, and dial-up access.

6.3.2 Pre-Dynix Procedures

The first step in responding to a request was to search the Library's own collection. To find out if Provincial Library had a specific title or information on a subject the searcher had to:

a) search the Provincial Library microfiche catalogue; then
b) search the microfiche supplement; and,
c) search Utlas online for titles acquired since the microfiche catalogues were produced (post 1987).

6.3.3 Problems with Pre-Dynix Procedures

The problems with the pre-Dynix catalogue search procedure were numerous. Provincial Library has two Utlas terminals. The terminals are used for searching for cataloguing information for regional libraries and Provincial Library acquisitions and for searching interlibrary loan locations. Staff are scheduled on the terminals every minute from 7:30 am to 5:00 pm. The lack of terminal time available for all the necessary activities resulted in restricted access for searching post-1987 (i.e. post Saskatchewan Union Microfiche Catalogue)

titles. The Library could not afford the additional $22,000 per year for another Utlas terminal to search current holdings.

Staff had no single source of information on what was in the Provincial Library collections. A reference librarian could search the microfiche catalogues for pre-1987 titles, but then would have to wait until the half-hour per day allocated to reference staff for Utlas subject searching to identify newer titles in Provincial Library's collection. Thus, each reference request could not be completed as a single step on the same day. The procedure of partially completing subject requests, then completing the search the following day affected the efficiency of the reference service.

Without access to current acquisitions of post-1987 titles, staff sometimes kept lists or cards by subject to provide patrons with the requested material.

6.3.4 Post-Dynix Procedures

The ability to search on Dynix is dependent on the indexing that has been done on the database. Most information in the bibliographic record and holdings file can be searched if the fields have been indexed. Each library decides what indexing will be done on their database.

Provincial Library's online catalogue allows searching by: exact title, title keyword, author, subject list (authority), subject keyword, ISBN, ISSN, Library of Congress number, series title, series keyword, and call number.

The Dynix online catalogue is menu driven with prompts at the bottom of each screen and help messages throughout. The single key prompts are very convenient. The library has the option of revising the help messages. The Dynix online catalogue also includes automatic truncation at the end of words and boolean searching within the same field for keyword fields (title, subject).

From the menu, the searcher selects the type of search (e.g. exact title, title keyword, subject list). An exact match produces the full bibliographic record. An inexact match provides the searcher with a range of options closest to the term being searched. The searcher can page (scroll) up and down the list of options and select the appropriate entry.

If more than one record is retrieved, a brief bibliographic record for each is displayed and the searcher again selects the desired entry to view the full bibliographic record. Each library determines what will appear on the brief bibliographic

record. Provincial Library's brief record includes title, author, publisher, call number, and date of publication.

The full bibliographic record immediately identifies the circulation status (whether the item is on loan, and if so, the due date), the collection code and call number, and complete bibliographic information. If the search produces only one matching record, the prompts offer the option of searching "related works". The searcher then selects works related to the author or one of the subject headings.

Author/title and subject requests are searched in the online Dynix catalogue. This provides single source access to the up-to-date holdings of Provincial Library. Up-to-date means, in fact, that Dynix includes not only the post-1987 materials, but also includes items on-order, items just received, items in circulation, items added with brief bibliographic records, e.g. vertical file materials, single issues of periodicals that are loaned as a whole issue. It will not include serials until the serials module has been loaded (after Release 130).

The Dynix system allows each library to make decisions regarding searching capabilities in the catalogue. Provincial Library decided which words would not be indexed. The selected words, called stopwords, are words that are so common in titles that the library prevents them from being indexed to improve searching efficiency (e.g. the, with). Additional words may be added to the stopword list as required. Words of less than three letters are automatically not indexed, so they do not have to be placed on the stopword list.

The Dynix system also allows the library to identify synonyms and variant forms of words. This is particularly useful for British/American spellings. Thus, if a searcher users one version of a word, the system matches and retrieves both versions of the word being searched.

On Dynix, punctuation and capitalization of search terms is ignored. For example, hyphenated words are searched as separate words and apostrophes are ignored.

6.3.5 Changes Resulting From Automation

Dynix met the requirements for an online public access catalogue. The online catalogue provides: circulation status of an item, location by library or specified section of the library, on-order or just received status, and brief bibliographic records to select from with access to the corresponding full bibliographic records. Dynix provides menu searching of indexed fields in the database but does not

provide command searching for experienced searchers, at present. Dynix permits keyword searching of indexed fields (e.g. title, title series, and subject) and browsing of authority records (e.g. author, subject, and series). Boolean searching is available within indexed fields (but not across fields) using "and" and "or" only. Dynix provides automatic truncation and defined truncation. It is possible to limit a search by date using a hidden command. At present, Dynix does not provide the ability to limit a search by collection, but this may be an enhancement in Release 130 of the system. Staff especially appreciate the single key prompts for searching.

Dial-up access, which is critical to resource sharing, will be available on Dynix soon.

One major objective of automating the catalogue was to provide a single source for searching the Provincial Library collections. This objective has been fulfilled to the extent of the collection that was catalogued and in machine-readable-form. Some parts of the collection are not yet in the online catalogue, e.g. portions of the multilingual collection, government documents, serials, last copy fiction collection. This objective will be fulfilled when all items in the collection are represented in the database.

The test of a catalogue, online or other, is the extent to which the searcher can find the desired information quickly and easily. The search process on Dynix provides three major advantages for subject searching.

The first advantage is that the searcher can see the list of subject headings used in the Provincial Library collection and select the most appropriate subject heading from a range of options. If the searcher selects a subject, reads the citation and decides it is not what is wanted, the searcher simply keys "B" to return to the subject list and select an alternate subject.

The second advantage is that, if a subject search yields only one citation for a particular subject, the searcher has the option of searching "related works" by author or subject. This feature reflects that sometimes a searcher finds a suitable citation and then uses the subject headings from that citation to find other useful titles.

The third major advantage for subject searching is the ability to do keyword and boolean searching. The fourth advantage is the ability to truncate the search term in a keyword search. Keyword searching is very useful when significant words in a title or subject heading are not necessarily the first word of

the title or subject heading. It is also helpful for multilingual titles because searchers (who do not speak all the languages requested) can use the keyword search to identify a title that does not show the correct diacritics. Searchers find this method of searching transliterated titles easier than searching Utlas. On Utlas, titles must be exact and if there is no exact match the searcher must try an alternate access point other than title.

The online catalogue is valuable for identifying different editions of a title which have different call numbers. This allows staff to weed earlier editions of the same title which are not shelved together.

Other advantages of searching on Dynix are: the search term is displayed throughout the search, and searches can be saved to create bibliographies. (The "save bibliography" feature is described in greater detail in the Bibliographies section of the report.) Also, the ability to have cross-references in the future will improve subject access.

Thus, a major benefit of the implementation of Dynix is immediate access to, and use of, the Provincial Library's collections. The online catalogue provides all staff with immediate access to the status of materials including items on-order and just received. The online catalogue provides improved access to the collection through keyword and boolean searching.

6.4 Acquisitions

6.4.1 Requirements for Acquisitions

The acquisitions process allows Provincial Library to place orders and receive items for the collections, and to prepare reports on the book budget spent and encumbered, by assigned category.

Automation of the acquisitions function was intended to provide, at a minimum, the following:

a) generation of printed order forms;
b) check in, with the ability to modify the information on the original order;
c) recording of vendor status reports;
d) provide management information on activities within the function.

Provincial Library also wanted the acquisition module to provide fund accounting capabilities by maintaining a record of funds allocated, committed, and expended by section and subject code and by providing monthly, annual and cumulative year-to-date reports on the fund accounts.

6.4.2 Pre-Dynix Order Procedure

The first step in preparing a purchase order was to check the Library's catalogue and order files to ensure that the order was not a duplicate. At Provincial Library this was taken one step further. The Collection Policy states that Provincial Library will not purchase non-fiction owned by other libraries in Saskatchewan. Therefore, reference staff checked potential non-fiction orders on Utlas, before giving orders to acquisitions staff. The process of checking Utlas for other Saskatchewan locations also identified duplicates where Provincial Library was listed as a location. Orders for large print, talking books, and other alternate format materials were searched by Special Services staff on the Saskatchewan Union Microfiche Catalogue before they were given to acquisition staff. In the alternate format collections, duplicates not found in the Saskatchewan Union Microfiche Catalogue were tolerated.

Before Dynix was implemented, the acquisitions system was already partially automated. It consisted of a combination of paper files and budget data stored on a Wang computer. Order slips were created by typing the bibliographic and order information into the Wang and then printing the orders onto continuous forms. The order slips were separated, sorted by

vendor and mailed with a covering letter. One copy of each order slip was then filed alphabetically by title into an on-order file.

The Wang files were used to print the order slips. They were also used to maintain a record of committed funds and items received, by section, type of material, and subject codes.

Thus, the Library maintained the following paper and Wang files for acquisitions purposes:

Paper files:

- on-order file (including books, standing orders and subscriptions);
- audiovisual on-order file;
- multilingual on-order file;
- current year received file, i.e. items received in the current fiscal year: required to maintain information that the Wang file could not hold e.g. cancellation information and free material;
- past received file, i.e. items received in the previous fiscal year;
- audiovisual received file;
- multilingual received file;
- history file on standing orders, including pricing and receipt information;
- history file on subscriptions.

Wang automated files:

- books on-order file;
- audiovisual on-order file;
- multilingual on-order file;
- current year received file;
- audiovisual received file;
- multilingual received file (except French);
- French received file;
- standing orders file (current year);
- subscriptions file (current year).

When the Library received reports from publishers regarding: cancellations; back orders; not yet published; not our publication; or other reports, the order clerk pulled the order slip from the on-order file, recorded the information and refiled the order slip to provide an on-going record.

When an order was received, the order clerk unpacked and sorted the books; pulled the matching order slips from the on-order file; checked the items against the order slips recording new

information (ie. date received, actual price paid, any title change) and checked the order slips against the invoice; coded the invoices; typed received information (date received, actual price paid, and any title changes) onto the Wang; stamped the items; and filed the order slips into the received file.

If an item was not received within 90 days for rush orders (i.e. items ordered in response to a request) and 180 days for regular orders, the Library sent a letter to the supplier requesting a status report. For rush orders, a plastic coloured sleeve representing the month the item was ordered was put on all order slips so they could be identified. On a monthly basis, Staff checked the rush orders for items to be claimed. For regular orders, the procedure was to use the Wang on-order file to generate a list of titles sorted by date of order. The follow-up on regular orders occurred approximately every three months.

6.4.3 Problems with the Pre-Dynix Procedure

The major problem with acquisitions prior to Dynix was the lack of easy access to acquisitions information. Staff throughout the Library needed to know what items had been added to the collection since 1987 when the microfiche catalogue was produced. Staff also needed to know which items were on-order or recently received. So, staff maintained paper on-order and received files in each section of the Library in addition to the files in the acquisitions section.

For example, on-order and received files were maintained for the library science collection. When an item was received and catalogued, the call number was added to the order slip so staff could locate new library science material on the shelves. The library science order slips were also used to flag items to be sent on interlibrary loan when the item was received. Interlibrary loan requests were clipped to the order slip until the item was received, then used to identify which branch library to send the received item to.

Budgetary information on acquisitions was provided on the acquisitions report generated by the Wang. By manipulating and sorting the on-order file on the Wang, these reports showed encumbered funds coded by section, type of material and subject category.

The Wang reports were only accurate on the day they were produced. The reports gave a "snapshot" picture of the situation at the end of each month (or other times as requested). They did not report the amount ordered, and the amount received, during each month. They did not include the

annual budget information, by fund. The Wang system also did not provide year-to-date order reports. Therefore, staff in each section set up manual systems for maintaining information on the materials budget.

Duplicate orders occurred with the former acquisitions system because of misfiled order slips, typing errors, and the number of different staff throughout the library checking the catalogue, then other staff checking the on-order and received files later.

6.4.4 Post Dynix Procedure

At present, Provincial Library is using Dynix solely for regular (monograph) orders. Provincial Library places orders with almost 500 vendors. Standing orders (annual orders) and periodical subscriptions will be added to the system during 1991-92.

The acquisitions module, like all other modules, is menu driven. The menu provides an opportunity for a pre-order (duplicate) search in the bibliographic file by: author authority, title keyword, alphabetical title, ISBN/ISSN, Dynix bibliographic number, subject authority, subject keyword, series authority, dewey decimal call number, or item barcode number. The bibliographic file includes all catalogued, on order, and just received items. Entry of data to the order record includes: automatically checking the author authority file, assigning a vendor using a numeric code, entering new vendor information as required, entering the list price, assigning each order to a fund account, automatic conversion of foreign currencies to Canadian dollars for expenditure reports, assignment of the collection code, assignment of the claim period, and addition of "work slip notes" including directions about discarding an older edition or listing the call number for an added copy. When the order is fully entered and filed, the orders are printed on 8 1/2" x 11" computer paper. (See Appendix E for an example of an order for more than one item.)

The desiderata file in Dynix is very useful to Provincial Library for orders the Library wishes to place in the future, a form of "want list". The desiderata file includes a selection list field which allows subject areas to be considered as a group for future orders. It can also record items the Library never wants to purchase, but it has not yet been used for that purpose.

The Dynix acquisitions module handles foreign currencies (i.e. does the currency conversion). As each order is entered, the system converts the order to the appropriate currency, so all

financial reports reflect Canadian dollars spent or encumbered. This is important to Provincial Library because of the proportion of materials purchased from other countries. For example, the major supplier of the slow speed audio kits is a company in Australia.

When an order is received, the order clerk unpacks and sorts it; checks the order against the vendor invoice and receives the order on Dynix preparing a new order if any order information requires modification; prints workslips and matches workslips to the corresponding books; and creates an invoice record on Dynix and stamps the books. Creation of the invoice record, which involves entering the actual price and postage/freight costs, updates the fund accounts (i.e. moves funds from encumbered to expended) and updates other management reports (i.e. removes the item(s) from the list of encumbrances by title).

If an order is not received within 90 days for rush orders (i.e. items ordered in response to a request), and 180 days for regular orders, Dynix can automatically generate a claim notice to the vendor, based on the claim period assigned at the time the order was placed. Provincial Library reviews all claims because the specialized nature of the materials ordered makes inappropriate.

Dynix has the capability of being linked with Baker and Taylor to send orders electronically. Provincial Library decided not to implement this feature because the volume of orders to Baker and Taylor did not warrant the expense of buying a micro computer for acquisitions purposes.

6.4.5 Management Information and Reports

Dynix fund accounting allows for the creation of an unlimited number of fund accounts, sub-accounts, and sub-sub accounts. Provincial Library's fund accounts relate to the organizational structure of the Library (e.g. Bibliographic Services Section). The sub fund accounts relate to government assigned object codes for types of material (e.g. books, audio-visual). The Library's sub-sub fund accounts distinguish subject categories (e.g. business, medicine, reference) formats (e.g. large print, print/Braille) and languages (e.g. French, Spanish).

Dynix produces the following reports from the acquisitions module. The "Report of Expenditures By Fund" provides a monthly list of each new title received and the actual amount spent on each title, the total funds spent, and the number of items received by fund account. The "Report of Expenditures By Fund" is used as a new acquisitions report because it is

subdivided into categories. (See Appendix F for an example of this budget status report.)

Another report, called "New Titles Received", is a comprehensive alphabetical listing of all new titles received. Provincial Library does not use the "New Titles Received" report because it is not subdivided by fund account.

A budget status report, called "Report of Fund Status" includes the budget allocation for each subject category, funds encumbered, funds expended, the remaining balance, and the percentage of the budget used. Thus, the report provides year-to-date data on ordering. (See Appendix F for an example of a fund status report.) This report is used to manage the book budget.

Vendor performance reports provide number of titles and items ordered, items received, average fill time, percentage of fill, nominal and actual discounts, and orders outstanding. (See Appendix G for an example of a vendor report for Baker and Taylor.) The vendor performance report can be used to compare the performance of vendors. A library may decide to change its major jobber or may negotiate improved discounts on the basis of vendor performance reports.

The "Listing of acquisitions claims" report provides a list of items for which claim notices are due to be issued by Dynix. The list includes the title, vendor, and number of claims sent for that title. It can be sorted by title, vendor, or order number (which provides date sequence). Staff use this report to decide whether or not to cancel orders.

Dynix also produces a "Report of outstanding encumbrances by title" which includes the order number, the title, the quantity ordered, the order date, the fund key, and the amount encumbered. Since the list is not subdivided, Provincial Library does not print or use this report.

Dynix acquisitions reports provide information which allows management to calculate the annual average cost per title by dividing the number of titles received by the total funds spent each year.

The following chart summarizes the Dynix acquisitions reports:

Dynix Acquisitions Reports

Name of Report	Purpose
Report of expenditures by fund	New acquisitions list by fund
Report of fund status	Manage materials budget
Vendor performance report	Assess and compare vendor performance
Purchase alert report	To decide whether to buy
Listing of acquisitions claims	To decide whether to cancel orders
New titles received	Not used by Provincial Library
Report of outstanding encumbrances	Not used by Provincial Library

6.4.6 Changes Resulting from Automation

The acquisitions module of the Dynix system has met the acquisitions requirements listed. However, modifying information on an order requires creating a new order with the revised information and cancelling and deleting the original order.

With the Dynix acquisitions system, items that are on-order or just received can be accessed by author, exact title, title keyword, ISBN, or Library of Congress number. Formerly, they could only be accessed by title.

With the implementation of Dynix, all paper and Wang files except those relating to standing orders and subscriptions were eliminated. Thus, the Library was able to dispense with a total of 14 files. The 4 remaining paper files and Wang files, related to standing orders and subscriptions, will be eliminated when they are added to Dynix during the 1991/92 fiscal year. At that time, it will be possible to eliminate the Wang computer and associated annual maintenance contract costs of $1,128.

To examine efficiency, Library staff recorded the staff time required to place 50 orders using the Wang system and 50 orders using Dynix. The Wang system required an average of 4.1 minutes to place an order and 2.8 minutes to receive an order. This included assigned a jobber checking for duplicates in the on-order and received files, typing and printing the order, sorting order slips by jobber, completing the form letter, typing the envelope, date stamping the order to be returned to

ordering section, and filing one copy of the order slip in the on-order file.

The Dynix system required an average of 5.5 minutes per item to place an order and 7 minutes per item to receive an order. Ordering on Dynix included: assigning a vendor, creation of new vendor records for vendors not previously used, checking the database for duplicates, checking author authority records, entering the order, printing orders, and typing the envelopes.

Receiving an order using the Wang System, and using Dynix, is described in detail in previous sections.

Preparation of monthly reports on the Wang system required 2.5 hours per month of staff time; preparation of orders on the Dynix system requires .5 hours per month of staff time. The following chart outlines the time required by each system.

Comparison of Staff Time Required for Acquisitions Function

	Wang system	Dynix
- placing an order	4.1 minutes/order	5.5 minutes/order
- receiving	2.8 minutes/item	7.0 minutes/item
- month end report	2.5 hours/month	.5 hours/month

Although the Dynix system requires more time to enter and receive an order, the major advantage of the integrated acquisitions function is that all staff have access to information on titles from the time they are placed on order. The online catalogue now includes "free" items and gifts before cataloguing, which were not identified in the former Wang system. (Acquisitions staff input a brief bibliographic record into the catalogue module to ensure that these items are represented in the catalogue.) Service is improved because holds can be placed on titles which are on-order or just received.

In addition, two reports from Dynix provide information used for managing the materials budget which was not available from the Wang system. The monthly "report of expenditures by fund" identifies the actual amount spent in each fund account and the number of items received by fund account. The "report of fund status" provides year-to-date budget information including automatic foreign currency conversions. Thus, the fund accounting used to manage the materials budget is more accurate.

Identifying and eliminating duplicates is easier and more reliable using Dynix. Non-fiction orders continue to be checked on Utlas for other Saskatchewan locations. But, the check for duplicates is done at the same time by a single individual in one database, not by different staff at different times in different files.

It is possible to produce spine labels using the Dynix system but Provincial Library is not using this feature.

Prior to the implementation of Dynix the acquisitions function was already automated to some extent at Provincial Library, but the system was not integrated with the catalogue, and the system did not provide cumulative (year-to-date) reports on expenditures by fund account or in total. Furthermore, the Wang system did not identify loan requests as part of the acquisitions record. Integration of the acquisitions system with the catalogue, combined with the ability to place holds on items in the acquisitions module, is an important improvement in service to client libraries.

To summarize, Dynix met the requirements for the acquisitions function by providing: generation of printed order forms, check in and modification of orders, record of vendor status, and improved management information reports.

7.0 BIBLIOGRAPHIES

7.1 Purpose

A bibliography is "a list of books of a particular author, printer or country, or of those dealing with any particular theme; the literature of a subject"[3]. Provincial Library has produced many booklists and bibliographies i.e. lists of talking books, subjects in the field of library science, and bibliographies of specific language groups in the multilingual collection.

Bibliographies are an important source of information for client libraries and their patrons. Language bibliographies (e.g. French, Vietnamese) provide access to the multilingual collection by language group, which is not provided by the Saskatchewan Union Microfiche Catalogue. As regional libraries have pointed out, in small branch libraries without microfiche readers, printed bibliographies provide the only access to Provincial Library's collections.

7.2 Pre-Dynix Procedures

The procedure for producing bibliographies depended on the type of bibliography being produced e.g. library science, language, alternate format collection.

For the French and Vietnamese language bibliographies, the steps were:

a) notify Utlas of the bibliography wanted (with an estimate of the number of titles involved) so they could put Provincial Library into the products queue;
b) provide Utlas with selected titles to run a sample product;
c) review the sample product and, in some cases, initiate costly additional programming required to separate adult and juvenile titles;
d) receive the product from Utlas;
e) prepare the introduction and contents for printing.

The turnaround time to receive an Utlas-produced master copy bibliography varied from three weeks to three months, depending on the type of bibliography and whether or not additional programming was required.

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[3] Landau, Thomas. Encyclopedia of Librarianship, 3rd ed., Bowes, 1966. p.51.

Library science bibliographies include books, audiovisual items, and journal articles, for example, the Fundraising for Libraries bibliography, a selected list of materials from Provincial Library's collections. Prior to the implementation of Dynix, the steps to prepare such a bibliography were:

a) search the Saskatchewan Union Microfiche Catalogue under the appropriate headings and copy the selected entries using the fiche/film reader printer;
b) cut and tape the entries to cards to sort the entries alphabetically;
c) search other sources to locate additional titles e.g. Utlas for post-1987 titles, Library Literature and cut and tape the entries to cards for sorting;
d) review and annotate entries;
e) sort entries and have the list typed;
f) proofread, correct entries, and send the bibliography for printing.

The turnaround time for library science bibliographies varied from one to three months.

Provincial Library also prepared a talking book bibliography by copying a portion of the Saskatchewan Union Microfiche Catalogue at the request of regional libraries. They expressed the need for a more recent list for communities and bookmobiles without microfiche readers. Making a print copy of the "Talking Book" subject heading in the Saskatchewan Union Catalogue on Microfiche was time-consuming and costly because of the printing process required to go from a microfiche to a print format. The turnaround time on this bibliography was more than three months.

7.3 Problems with Pre-Dynix Procedures

The major problem in producing bibliographies was the turnaround time. There was a long delay between the date that the decision was made to produce a bibliography and the date the product was available to client libraries.

The reasons varied. For Utlas-produced bibliographies, they included: length of time in the Utlas production queue, and time for any extra programming. For library science bibliographies, they included searching for appropriate material, creating a list, annotating entries, typing, proof-reading, and revising the bibliographic information.

7.4 Post-Dynix Procedures

Bibliographies can be produced using Dynix in one of three

ways:

- full citations can be printed one at a time and collated;
- the "save bibliography" command can be used to create a list of abbreviated titles and call numbers; and
- the Recall program can be used to create a bibliography according to specified criteria.

In the public access catalogue module, a searcher can "save" citations by keying in "SB". As the "SB" command is keyed for each citation, a bibliography is created. When the searcher has all the desired citations, the bibliography can be printed by returning to the main menu and selecting the "Print bibliography" command. The list generated by this command includes author, partial title, and partial call number; they are printed in the sequence searched.

The "save bibliography" command is useful to Provincial Library staff in spite of the limited information printed (incomplete title and call number). This command could be very useful in a public library where patrons could quickly create a list of titles (not in circulation) and use the list to seek the titles on the shelves.

The other method of creating a bibliography on Dynix is using the Recall program. The Recall program is a feature of Dynix's Pick operating system. Special reports can be generated based on information in the database using the "Recall query language". The listings produced by the Recall program include the complete author, title, call number, place of publication, publisher and date of publication. They are printed in author, title, or call number order as requested. They do not include annotations because the database does not include annotations.

The difference between the "save bibliography" command in the online catalogue and the Recall program is that the Recall list can be printed in a selected sequence, and it includes more complete bibliographic information.

7.5 Changes Resulting From Automation

The most significant change resulting from the implementation of Dynix is the speed with which certain bibliographies can be produced. A bibliography produced by Utlas was put into a product queue; Provincial Library determines the priority for a Dynix-produced bibliography. A Dynix bibliography can be produced the same day it is requested. This has reduced turnaround time by three weeks or more depending on the bibliography.

An Utlas-produced bibliography is more sophisticated than a

Dynix-produced bibliography. An Utlas bibliography can be indexed. Dynix bibliography does not have this capability. Utlas bibliographies include diacritics for language bibliographies. Utlas bibliographies are also "print-ready" and do not require editing and typing prior to printing. Therefore, Provincial Library may continue to produce language bibliographies on Utlas as need arises.

However, Dynix capabilities satisfy most of Provincial Library's needs for other types of bibliographies, and there is no payment to an outside organization for producing the Dynix bibliography. Also, Dynix bibliographies include on-order and just received items, which an Utlas bibliography cannot include. With Dynix, the bibliographies can be more customized to client library needs, and they are produced much faster. To resolve the problem of re-typing Dynix bibliographies, Provincial Library is investigating the possibility of downloading the results of the Dynix Recall program to a microcomputer and editing the bibliography using the Library's WordPerfect software, rather than retyping the entire bibliography.

The Dynix online catalogue allows staff to print one or more citations to send in response to a reference question. While the ability to print citations is pertinent only for certain requests, it is an ability that was not previously available.

The Recall program has been used to generate a list of the juvenile large print collection, the native materials collection, and the annual list of library science videocassettes. The juvenile large print and library science videocassette bibliographies required editing prior to typing and printing unlike Utlas bibliographies which are print ready.

The native materials bibliography is worthwhile noting because: (a) it was produced in response to a specific client request, and, (b) outside printing was not required. Saskatoon Public Library requested a list of Provincial Library's native collection as part of a process to evaluate the native materials in the Saskatoon Public Library collection. The bibliography was produced the same day it was initiated and was in the hands of the requester in less than one week. Had the bibliography been produced using Utlas, the turnaround time would have been three weeks to three months to receive the bibliography and there would have been a payment to Utlas create the bibliography.

To summarize, the implementation of Dynix has allowed Provincial Library to improve its bibliographies service to client libraries through faster turnaround time and an improved range of options available for producing bibliographies.

8.0 COST BENEFIT ANALYSIS

8.1 Operating Costs

Operating costs prior to automation for the functions described originated from:

- annual maintenance contract for the Wang computer used for acquisition;
- transaction cards for the Recordak circulation system;
- films and film processing for the Recordak circulation system;
- Westbridge costs for the overdues system;
- printed mailing labels;
- printed reports and forms.

Some elements of the former system have been eliminated. Some elements have been replaced through use of Dynix. Utlas cataloguing and communications costs remain the same. The following lists identify examples of items eliminated and items replaced:

Items Eliminated

- transaction cards
- identification slips (e.g. periodicals, vertical file)
- weekly transaction report form
- weekly damaged and lost transaction card report
- job requisition form for film processing
- statistics gathering forms (daily/weekly/monthly)

Items Replaced	By
• 3-part order forms	order printout
• overdue notice forms	Dynix mailer
• 117 form to advise client library of reserves and reserves expired	Dynix mailer
• book report form	Dynix mailer
• pre-printed mailing labels	individually printed mailing labels

The 3-part order forms formerly used as part of the acquisitions process were last ordered in July, 1984. The supply of 30,000 order forms, at a cost of $1,769 lasted until Dynix ordering was implemented in June, 1990, at an annual cost of approximately $300. These forms have been eliminated.

The annual cost of the Recordak circulation and overdues system, $11,400, was eliminated with the implementation of Dynix. The former overdue notice form was eliminated at a saving of approximately $350 per year.

As the section on address labels identified, the change from pre-printed labels to computer labels represents an annual saving of $240 in operating costs.

A book report form, used to advise requesting libraries that a library science book was on-order or had been reserved was replaced by the Dynix mailer advising that the item is on hold. The elimination of this form saved approximately $500 per year.

Therefore, the total savings in operational costs resulting from the implementation of Dynix was approximately $12,800. The annual maintenance contract of $1,128 for the Wang computer used for acquisitions will be eliminated when subscriptions and standing orders are automated.

Operating costs since automation originate from the following:

- $24,000 per year for Dynix annual maintenance charges;
- approximately $400 per year for computer paper (for reports, hold notices, etc.);
- approximately $500 per year for Dynix mailers (for overdue notices, recall notices, hold expired notices, invoices);
- approximately $240 per year for mailing labels.
- approximately $320 per year for barcodes.

Operating costs for Dynix are estimated because, at the time of writing, the system has not been in full operation for a twelve month period. Dynix operating costs are estimated at $25,500 per year. The $12,800 savings from the former procedures have been applied to the Dynix operating costs. Thus, the real cost of the Dynix Library System to Provincial Library is $12,700 per year.

8.2 Staff Time

A significant amount of staff time has been saved through the implementation of Dynix. Appendix A outlines staff time required for various functions prior to automation and after automation.

Elimination of typing of overdue notices saved 292 hours per year of staff time valued at $3,200. Elimination of batch production of address labels saved 43 hours per year valued at $520. Automated invoicing for unreturned books saved approximately 52 staff hours per year valued at $620. The

amount of staff time spent preparing and calculating statistical reports has been reduced by 120 hours per year valued at $1925. The total value of staff time saved was $6,265 per year (not including benefits).

Thus, the ratio of staff time required before and after automation for library activities went from 292:0 for typing overdues, 14:1 for gathering statistics, 5:1 for renewing books, 5:1 for invoicing for unreturned books, and 2:1 for placing and processing holds.

As Appendix A indicates, there was no overall time savings in the acquisitions and cataloguing functions. Ordering, receiving and downloading requires 10 minutes more per item. However, time was saved in filing in paper files.

8.3 Summary

The Dynix library system cost $200,000 to purchase, including the computer, 9 terminals, all services (i.e. training), shipping, duty, and provincial sales tax. The annual operating costs, including the maintenance contract, are $25,500.

In return, Provincial Library has experienced a number of benefits. One of the primary benefits of implementing the Dynix library system was improved access to and use of the collection through the online catalogue. Information on the collections, including post-1987 items and on-order and just received items, is now available to all staff. Access was improved through title and subject keyword and boolean searching capabilities. Access was also improved through immediate access to the status of items (i.e. due date), the improved hold system, and the ability to recall items.

Access to and use of a library collection is important to get the best possible value for library collection expenditures. The implementation of Dynix has increased the cost effectiveness of funds spent on materials at a time when each dollar allocated for purchase of materials has less buying power than it had previously.

Adequate bibliographic access to Provincial Library collections is particularly critical because of the specialized nature of the collections and because individual items increasingly represent items not owned by other libraries in Saskatchewan. Thus, the benefits of improved access accrue not only to Provincial Library but also to all libraries which borrow from the Provincial Library collections.

Effective hold and recall capabilities are especially important for materials not available in other Saskatchewan libraries and/or for other materials not eligible for interlibrary loan outside the province.

Formerly, circulation policies were driven by the inadequacies of the manual circulation system rather than by the needs of client libraries. Two examples were: (1) inflexible loan periods, (2) the policy of placing only one hold per title per library system. Now, with the implementation of Dynix, loan periods are customized on request and it is possible to place more than one hold per branch library per title.

Therefore, the major benefits to Provincial Library of implementing the Dynix Library System were:

- improved access to and use of the collections;
- increased cost effectiveness of funds spent on collections;
- new ability to recall items and improved hold system;
- circulation policies which reflect client library needs;
- ability to circulate, renew, and send overdues for blocks as a group;
- ability to renew loans by telephone;
- the ability to trace and track missing items sooner;
- faster turnaround time for preparation of bibliographies;
- automated statistics gathering and Library designed statistical reports;
- more accurate fund accounting to manage the book budget;
- reduction of the annual cost of automation through application of the yearly savings from former operations to the annual maintenance costs of Dynix;
- savings of 507 hours of staff time, valued at $6,265 per year; and
- faster turnaround time for interlibrary loan requests filled from Provincial Library's collections (as described in the Interlibrary Loan Turnaround Time Study).

9.0 POLICY AND PROGRAM ISSUES

9.1 Individual Borrower Records

Which library is responsible for maintaining interlibrary loan records which identify the individual borrower?

When borrowing libraries receive overdues, some cannot identify the individual patron for whom the item was borrowed.

The problem appears to arise from the way interlibrary loan records are maintained in branch libraries, and the volume of interlibrary loans handled by a branch. Branch library staff who deal with larger volumes of interlibrary loans cannot remember the individual borrower who requested and received each title. Interlibrary loan records may be filed by title, by patron, by due date, or by author. The information provided on a Provincial Library overdue notice includes title, due date, and accession number but does not include the name of the individual patron or the author.

The question of responsibility for maintaining loan records which identify the individual borrower is important because the implications go beyond Provincial Library. If Branch X borrows an item from Branch Y on interlibrary loan, is Branch Y responsible for maintaining a record of the individual borrower for whom Branch X requested the item?

In future, as library systems automate, some of the larger branch libraries will be automated. If their automated system has the capacity to circulate items from other libraries, as Dynix has, the requesting library will have full circulation information on their system. They will easily be able to identify their own individual borrowers. Interlibrary loan records in non-automated branch libraries could be filed by due date or by title.

For Provincial Library, this question also relates to the statistics used for the annual Statistical Summary. It will be necessary to ensure that interlibrary loan activity is not double-counted, at both lending and borrowing library. To be consistent with the procedures used for compiling direct interlending statistics, the interlibrary loan statistics would be identified by the lending libraries. In other words, interlibrary loan circulation in recipient libraries would not be included with circulation statistics submitted to Provincial Library.

9.2 Access to the Database

There are several policy issues Provincial Library will have to address in the future. The provision of dial-up access to Dynix raises the issue of who should have access to the database. At present, Provincial Library's collections and services are available only to libraries which support resource sharing by allowing other libraries access to their collections. Should dial-up access be provided to all libraries? Should dial-up access be available to any individual with a microcomputer and a modem?

Dial-up access will provide the capability to search the online public access catalogue. Will those provided with dial-up access be able to access any other modules, for example, will a regional headquarters be allowed to place a hold on behalf of one of their branches?

Therefore, the issues regarding access are: (1) who should have access to the database, and (2) what level of access should be provided?

9.3 Priority for Expanding the Database

What priority should be assigned to adding Provincial Library collections and services to the Dynix database?

The Dynix database does not yet reflect all materials available from Provincial Library. Materials that could be added to the database include: periodicals, government documents, subject headings in the general vertical file, subject headings in the library science vertical files.

In addition, Provincial Library reference staff are working on a project to index all the songbooks in Provincial Library's collection. Another project is examining the possibility of indexing the Western Producer. These are services which Provincial Library may be able to provide province-wide access to, through Dynix.

Another option may be to load CD-ROM databases to Dynix, e.g. Readers Guide Abstracts, General Periodicals Ondisc (a full-text CD-ROM database providing indexing, abstracts. and full-text articles for general interest periodicals).

The Steering Committee discussed the option of loading the Saskatchewan Union Catalogue records to the Dynix library system; this remains an option. It would remove Saskatchewan public library participation in part of the National Union Catalogue (i.e. Utlas). However, it would significantly reduce

the cost of obtaining catalogue records.

The priority for adding collections and services to the database (or providing access through Dynix) will be dependent both on funding and technology.

To summarize, the issue is the priority in which collections and services are made accessible on the Dynix library system.

10.0 CONCLUSION

In conclusion, the automation project has fulfilled its main objective of automating a maximum number of the Provincial Library's functions. The Evaluation Committee concluded that the Dynix library system met the Provincial Library's automation needs as outlined in the Request For Proposal. While automation increased the Provincial Library's annual operating costs, the benefits accrued are well worth the additional $12,700.

This concludes the first phase of automation development outlined in the RFP. To test the suitability of the Dynix library system in a library network, the next stage of development requires automation of one or more regional libraries. It will then be possible to evaluate the network functions and identify the organization, policy, and service implications associated with delivery of services through an automated network.

11.0 APPENDICES

APPENDIX A

COMPARISON DATA ON STAFF TIME REQUIRED FOR EACH FUNCTION PRE-DYNIX AND POST-DYNIX

	Pre-Dynix	Post-Dynix
CATALOGUE SUPPORT		
- downloading records	-	4 minutes/record
CIRCULATION		
- individual item	21.6 seconds/item	32 seconds/item
- renewals	1 min 11 sec/item	1 min 45 sec/item
- place reserve/hold	2 min 32 sec/reserve	1 min 30 sec/hold
- process reserve/hold	2 min/reserve	1 min 15 sec/hold
- statistics reports	129 hours/year	9 hours/year
BLOCKS		
- circulation	6 min 20 sec/block	5 min 48 sec/block
- renewals	15 minutes/block	2 min 45 sec/block
OVERDUES		
- sorting/separating	58 hours/year	50 hours/year
- typing overdues	292 hours/year	-
ADDRESS LABELS		
- printing labels	63 hours/year	20 hours/year
INVOICING		
- shelf search etc.	72 hours/year	14 hours/year
ACQUISITIONS		
- placing an order	4.1 minutes/order	5.5 minutes/order
- receiving	2.8 minutes/item	7.0 minutes/item
- month end reports	2.5 hours/month	.5 hour/month

APPENDIX B

Examples of Lotus Circulation Compilations

Circulation Statistics 1990/91
Collections Summary

Collection Totals	APRIL	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC	JAN	FEB	MAR	TOTAL
Last Copy Fiction	33	26	31	35	28	46	49	22	44	32	16	0	362
Library Science	155	101	80	78	83	99	148	198	151	318	267	0	1,678
Native	64	59	42	27	49	48	92	94	49	62	85	0	671
Non-Fiction	2,070	1,919	1,317	1,224	1,114	1,338	2,240	3,367	2,112	2,648	3,384	0	22,733
Total Multilingual	2,977	1,820	1,756	2,621	3,274	1,672	4,534	3,145	3,838	3,553	4,055	0	33,245
Total Alternate Format	2,194	3,147	1,501	1,063	1,026	745	1,241	1,137	1,072	1,215	1,270	0	15,611

APPENDIX C

EXAMPLE OF A BLOCK LIST

12 FEB 91 Saskatchewan Provincial Library 04:25 PM
Circulation Module

Checkout & Renewal

JM CUELENAERE LIB BL 10756 10756

30	BARCODE	TITLE	DUE DATE TIME
1	00173 8282	Man aus Apulien : die privaten	25 FEB 91 00:00
2	00157 8746	Olympia 84 : Los Angeles, Sara	25 FEB 91 00:00
3	00164 0405	Dich zu lieben kann ich	25 FEB 91 00:00
4	00402 9242	40 Jahre DDR : eine Chronik in	25 FEB 91 00:00
5	00174 0205	Indiskrete Antworten :	25 FEB 91 00:00
6	00402 9226	Nicaragua : Menschen	25 FEB 91 00:00
7	00123 0512	Tochter der Innuit : sprung	25 FEB 91 00:00
8	00402 9259	Indianer, Cowboys, :	25 FEB 91 00:00
9	00402 9168	California Gold /	25 FEB 91 00:00
10	00168 9709	Die Ratting	25 FEB 91 00:00
11	00159 1426	Die Jungfrau im Lavendel /	25 FEB 91 00:00
12	00164 6865	Die Nacht nach Betti Hagen :	25 FEB 91 00:00
13	00165 0735	Daumenkino /	25 FEB 91 00:00

Quit, Renew, Lost, Claim Return, Change d'date, Display Call# :

12 FEB 91 Saskatchewan Provincial Library 04:25 PM
Circulation Module

Checkout & Renewal

JM CUELENAERE LIB BL 10756 10756

30	BARCODE	TITLE	DUE DATE TIME
14	00027 4776	Thrill : drei Erzahlungen /	25 FEB 91 00:00
15	00149 2997	Bauch, Taille und Hufte	25 FEB 91 00:00
16	00402 9325	Brigitte Kinder basteln /	25 FEB 91 00:00
17	00027 2788	Tiere /	25 FEB 91 00:00
18	00027 2796	Wissen	25 FEB 91 00:00
19	00159 1467	Schiff der Hoffnung ; Schwarzer	25 FEB 91 00:00
20	00159 1350	Die im dunkeln sieht man nicht :	25 FEB 91 00:00
21	00164 0603	Taubenjagd : Erzahlungen /	25 FEB 91 00:00
22	00027 4412	Flori : Peters-Bilderbuch /	25 FEB 91 00:00
23	00402 8962	Ein Tag in meinem Dorf /	25 FEB 91 00:00
24	00402 9457	Als Teddy vollig durcheinan	25 FEB 91 00:00
25	00402 9424	Erst taut der Schnee dann	25 FEB 91 00:00

```
26    00026 1369  Der Fremde aux Orbitanien /        25 FEB 91 00:00
      Quit, Renew, Lost, Claim Return, Change d'date, Display Call# :

      12 FEB 91       Saskatchewan Provincial Library          04:25 PM
                            Circulation Module

Checkout & Renewal

JM CUELENAERE LIB BL 10756                                     10756

30    BARCODE         TITLE                                DUE DATE TIME

27    00174 5675  Zehn Finger hab ich : das Bilh    25 FEB 91 00:00
28    00141 1823  Tierkinder aus aller Welt /       25 FEB 91 00:00
29    00164 9406  Fruhstuck fur Amanda : und        25 FEB 91 00:00
30    00403 7649  KINDERGEDICHTE                    25 FEB 91 00:00



Quit, Renew, Lost, Claim Return, Change d'date, Display Call# :
```

APPENDIX D

EXAMPLE OF A BLOCK OVERDUE NOTICE

FROM: SASKATCHEWAN PROVINCIAL LIBRARY
1352 WINNIPEG ST.
REGINA, SASKATCHEWAN S4P 3V7

Dynix MAILER

*** FIRST NOTICE *** 05 FEB 1991

Library records show the following item(s) overdue. If you have returned them, please excuse this notice. Otherwise, please return them as soon as possible. To request an extension phone 787-2987

MPOLAF	Pol Kis	Podroz w czasie /	001317673	30 JAN 91
MPOLAF	Pol Mac	Na pobojowisku : Maciek	001542080	30 JAN 91
MPOLAF	Pol Vla	Wierny Ruslan /	001505590	30 JAN 91
MPOLAF	Pol/Rad	Kawalerowie Virtuti	000313335	30 JAN 91
MPOLAF	Pol 23	Zycie po zyciu /	000222106	30 JAN 91
MPOLAF	Pol Grz	I ja i Franus /	001691010	30 JAN 91
MPOLAF	Pol 94	Cztery z tysiaca /	001620811	30 JAN 91
MPOLAF	Pol 32	Polska a zagranica /	001584330	30 JAN 91
MPOLAF	Pol Bee	Trylogia o Miriam /	001618302	30 JAN 91

TO: NORTH BATTLEFORD LIB BLOCK

10698

LAKELAND LIBRARY REGION
1392 - 101ST STREET
NORTH BATTLEFORD, SASK. S9A

1A2

APPENDIX E

EXAMPLE OF ORDER FORM FOR MORE THAN ONE ITEM

SASKATCHEWAN PROVINCIAL LIBRARY
MATERIAL ACQUISITIONS ORDER

Multiple Title Form

Order Date: 13 Dec 1990

Bill/Ship to: SASKATCHEWAN PROVINCIAL LIBRARY
Technical Services Branch
1352 WINNIPEG ST.
REGINA, SASKATCHEWAN S4P 3V7

Vendor: BAKER & TAYLOR COMPANY
380 EDISON WAY
RENO, NEVADA 89564

Cust.No: L 24208-1

PLEASE REFER TO OUR ORDER NUMBERS ON ALL CORRESPONDENCE.

ADDRESS ALL CORRESPONDENCE TO: Mrs. J.G. Goranson, Acquisitions,
Technical Services Branch
Tel:(306)787-2990, Fax:(306)787-8866

Special Instructions :

Order # Author	Title	Year, Publisher	ISBN	Qty. Media/Binding	Price
4179 Velleman, Ruth A.	Meeting the need of people with disabilities:	1990, Oryx Press	0897745213	1 BOOK	34.50
4213	Hydrocephalus	1987, Elsevier	4900392812	1 BOOK	73.50
4223	High/low handbook: encouraging literacy...3rd ed.	1990, R.R.Bowker	0835228045	1 BOOK	39.95

APPENDIX F

EXAMPLE OF A BUDGET STATUS REPORT

Fund Name	Library Acct. #	Budget	Encumbered	Expended	Balance	% Used
SRP BSD AV-AUD	2-317-08	500.00	21.69	192.68	285.63	43%
SRP BSD AV-VID	2-317-09	2840.00	680.22	612.01	1547.77	46%
SRP BSD AV-MICRO-S	2-317-12	6900.00	420.00	22.55	6457.45	6%
SRP BSD AV-MICRO-M	2-317-14	100.00	17.75	0.00	82.25	18%
SRP BSD AV	2-317	10340.00	1139.66	827.24	8373.10	19%
SRP BSD BOOKS-FIRS	2-563-26	10000.00	6225.69	3334.61	439.70	96%
SRP BSD BOOKS-STAS	2-563-27	6000.00	0.00	0.00	6000.00	0%
SRP BSD BOOKS	2-563	16000.00	6225.69	3334.61	6439.70	60%
SRP BSD	2	45680.00	7365.35	4161.85	34152.80	25%

APPENDIX G

EXAMPLE OF VENDOR PERFORMANCE REPORT

Material Acquisitions Vendor Performance

Name : BAKER & TAYLOR COMPANY
Street : 380 EDISON WAY
City : RENO, NEVADA 89564
Contact: NORMA JEAN SHERWOOD
Phone : 1-800-648-3944

Deposit Balance : 0.00
Nominal Discount : 0.0000 Actual Discount : 0.0347

Items Ordered	This Year :	400	Last Year :	
Amount Paid	This Year :	13111.28	Last Year :	
Fill Time	This Year :	53 days	Last Year :	days
Percent Fill	This Year :	65%	Last Year :	%

Titles Ordered	:	400	Claims - First	:	41
Items Ordered	:	400	- Second	:	21
Items Received	:	259	- Third	:	
Items Paid	:	258	Date of Last Order	:	13 DEC 90

Outstanding Purchase Orders
As of 20 DEC 90

Order #	Title	Items Ordered	Prices	Amounts	Status
592	Disaster planning and recove	1	15.00	15.00	2nd claim
594	A fundraising handbook (loos	1	10.00	10.00	2nd claim
607	Library circulation systems	1	30.00	30.00	2nd claim
614	A sampler of forms for speci	1	30.00	30.00	2nd claim
631	Special libraries and inform	1	30.00	30.00	2nd claim
632	Managing children's services	1	25.00	25.00	2nd claim
633	Automated systems for school	1	27.00	27.00	2nd claim
636	Space planning for special l	1	30.00	30.00	2nd claim
637	Winning marketing techniques	1	65.00	65.00	2nd claim
638	Networking and special libra	1	15.00	15.00	2nd claim
	Totals	109		$5027.89	

APPENDIX H

LIST OF DYNIX REPORTS

The following is a list of some of the major management reports available with the DYNIX system.

1. Cataloguing Reports

Number of Items by Material Type
Number of Patrons by Patron Type
Use by Title
Use by Item
# of Titles Cataloged by Stat Class
# of Volumes cataloged by Stat Class
List of Authority Records
List of New Authority Forms

2. Circulation Reports

Circulation Overview
Item Statistical Class Report
Material Class (Item Type)
Patron Class (Loan Type)
Patron Statistical Class Report
Check Out Activity by Time
Check In Activity by Time
Holds Activity by Time
Daily Management Overview
Port Activity Report
Shelf List of Overdue Notices
Hold Alerts
Books on Hold Shelf
Holds Pull Lists
Past Due Items
Use Statistics
Item Status
Purchase Alerts
Snapshot of Circulation
Notices

3. Public Access Reports

Search Tracking

4. Acquisition Reports

Purchase Orders-Hardcopy
Checks/Vouchers
Claims Notices & Lists
Cancellations Notices & Lists
Items in Process Overdue Lists
New Title Lists
Invoices Not Cleared Lists
Fund Status
Fund Status Activity by Month
Selection Lists
Vendor Acquisitions Invoice
Vendor Lists
Vendor Performance and History
Open Order Reports
Audit Trails
Claims

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